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## ABSTRACT

This Alberta curriculum guide, focusing on wildlife, defines competencies that: help students build daily living skills; investigate career options in logistics occupations; use technology in the logistics field effectively and efficiently; and prepare for entry into the workplace or related postsecondary programs. Section A provides information on Career and Technology Studies (CTS), such as program rationale and philosophy, general learner expectations, curriculum structure and levels of achievement, curriculum and assessment standards, and basic competencies reference guide. Section B presents strand rationale and philosophy and strand organization, including development model, levels, scope and sequence, and module descriptions. Section C addresses planning for instruction for CTS and wildlife. Sections D-F contain 17 module curriculum and assessment standards for introductory, intermediate, and advanced levels. Each module within a level contains these components: level, theme, prerequisite, module description, module parameters, and curriculum and assessment standards. The latter are found in two charts: one correlating module learner expectations, assessment criteria and conditions, and suggested emphasis and the other concepts, specific learner expectations, and teacher notes. Sections G-J provide background information and strategies for assessing student achievement and assessment tools; an overview of linkages and transitions of CTS modules with organizations; lists of learning resources; and background information, strategies, a template for developing student learning guides, and several sample student learning guides. (YLB)

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ED 413 429

# CAREER & TECHNOLOGY STUDIES

## WILDLIFE

### GUIDE TO STANDARDS AND IMPLEMENTATION

1997

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This document supersedes all previous versions of the *Career & Technology Studies Guide to Standards and Implementation*.

This publication is a support document. The advice and direction offered is suggestive except where it duplicates the Program of Studies. The Program of Studies—a prescriptive description of the expectations of student learning, focusing on what students are expected to know and be able to do—is issued under the authority of the Minister of Education pursuant to section 25(1) of the *School Act*, Statutes of Alberta, 1988, Chapter S-3.1 as amended, and is required for implementation. **Within this document, the Program of Studies is shaded so that the reader may readily identify all prescriptive statements or segments.**

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# CAREER AND TECHNOLOGY STUDIES

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## A. PROGRAM RATIONALE AND PHILOSOPHY

Through Career and Technology Studies (CTS), secondary education in Alberta is responding to the many challenges of modern society, helping young people develop daily living skills and nurturing a flexible, well-qualified work force.

In Canada's information society, characterized by rapid change in the social and economic environment, students must be confident in their ability to respond to change and successfully meet the challenges they face in their own personal and work lives. In particular, they make decisions about what they will do when they finish high school. Many students will enter the work force, others will continue their education. All students face the challenges of growing independence and responsibility, and of entering post-secondary programs and/or the highly competitive workplace.

Secondary schools also face challenges. They must deliver, on a consistent basis, high quality, cost-effective programs that students, parents and the community find credible and relevant.

CTS helps schools and students meet these challenges. Schools can respond more efficiently and effectively to student and community needs and expectations by taking advantage of the opportunities in the CTS curriculum to design courses and access school, community and distance learning resources. Students can develop the confidence they need as they move into adult roles by assuming increased responsibility for their

learning; cultivating their individual talents, interests and abilities; and by defining and acting on their goals.

As an important component of education in Alberta secondary schools, CTS promotes student achievement by setting clear expectations and recognizing student success. Students in CTS develop competencies—the knowledge, skills and attitudes they are expected to demonstrate, that is, what they know and what they are able to do.

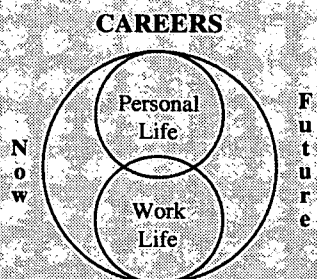
Acquired competencies can be applied now and in the future as students make a smooth transition into adult roles in the family, community, workplace and/or further education. To facilitate this transition, clearly stated expectations and standards have been defined in cooperation with teachers, business and industry representatives and post-secondary educators.

CTS offers all students important learning opportunities. Regardless of the particular area of study chosen, *students in CTS will:*

- develop skills that can be applied in their daily lives, now and in the future
- refine career-planning skills
- develop technology-related skills
- enhance employability skills
- apply and reinforce learnings developed in other subject areas.



In CTS, students build skills they can apply in their everyday lives. For example, in the CTS program, particularly at the introductory levels, students have the opportunity to improve their ability to make sound consumer decisions and to appreciate environmental and safety precautions.

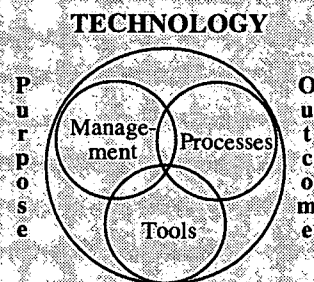


A career encompasses more than activities just related to a person's job or occupation; it involves one's personal life in both local and global contexts; e.g., as a family member, a friend, a community volunteer, a citizen of the world.

The integration of careers throughout the CTS program helps students to make effective career decisions and to target their efforts. CTS students will have the opportunity to expand their knowledge about careers, occupations and job opportunities, as well as the education and/or training requirements involved. Also, students come to recognize the need for lifelong learning.

Students in CTS have the opportunity to use and apply technology and systems effectively and efficiently. This involves:

- a decision regarding which processes and procedures best suit the task at hand
- the appropriate selection and skilled use of the tools and/or resources available
- an assessment of and management of the impact the use of the technology may have on themselves, on others and on the environment.



Integrated throughout CTS are employability skills, those basic competencies that help students develop their personal management and social skills. Personal management skills are improved as students take increased responsibility for their learning, design innovative solutions to problems and challenges, and manage resources effectively and efficiently. Social skills improve through learning experiences that require students to work effectively with others, demonstrate teamwork and leadership, and maintain high standards in safety and accountability.

As well as honing employability skills, CTS reinforces and enhances learnings developed in core and other complementary courses. The curriculum emphasizes, as appropriate, the effective application of communication and numeracy skills.

In addition to the common outcomes described above, students focusing on a particular area of study will develop career-specific competencies that support entry into the workplace and/or related post-secondary programs. Career-specific competencies can involve understanding and applying appropriate terminology, processes and technologies related to a specific career, occupation or job.

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## GENERAL LEARNER EXPECTATIONS

General learner expectations describe the basic competencies integrated throughout the CTS program.

Within an applied context relevant to personal goals, aptitudes and abilities; *the student* in CTS will:

- demonstrate the basic knowledge, skills and attitudes necessary for achievement and fulfillment in personal life
- develop an action plan that relates personal interests, abilities and aptitudes to career opportunities and requirements
- use technology effectively to link and apply appropriate tools, management and processes to produce a desired outcome
- develop basic competencies (employability skills), by:
  - selecting relevant, goal-related activities, ranking them in order of importance, allocating necessary time, and preparing and following schedules (managing learning)
  - linking theory and practice, using resources, tools, technology and processes responsibly and efficiently (managing resources)
  - applying effective and innovative decision-making and problem-solving strategies in the design, production, marketing and consumption of goods and services (problem solving and innovation)
  - demonstrating appropriate written and verbal skills, such as composition, summarization and presentation (communicating effectively)
  - participating as a team member by working cooperatively with others and contributing to the group with ideas, suggestions and effort (working with others)

- maintaining high standards of ethics, diligence, attendance and punctuality, following safe procedures consistently, and recognizing and eliminating potential hazards (demonstrating responsibility).

## PROGRAM ORGANIZATION

### CURRICULUM STRUCTURE

Career and Technology Studies is organized into **strands** and **modules**.

**Strands** in CTS define competencies that help students:

- build daily living skills
- investigate career options
- use technology (managing, processes, tools) effectively and efficiently
- prepare for entry into the workplace and/or related post-secondary programs.

In general, strands relate to selected industry sectors offering positive occupational opportunities for students. Some occupational opportunities require further education after high school, and some allow direct entry into the workplace. Industry sectors encompass goods-producing industries, such as agriculture, manufacturing and construction; and service-producing industries, such as business, health, finance and insurance.

**Modules** are the building blocks for each strand. They define what a student is expected to know and be able to do (exit-level *competencies*). Modules also specify prerequisites. Recommendations for module parameters, such as instructional qualifications, facilities and equipment can be found in the guides to implementation.

The competencies a student must demonstrate to achieve success in a module are defined through the *module learner expectations*. Senior high school students who can demonstrate the module learner expectations; i.e., who have the designated competencies, will qualify for one credit toward their high school diploma.



*Specific learner expectations* provide a more detailed framework for instruction. Within the context of module learner expectations, the specific learner expectations further define the knowledge, skills and attitudes the student should acquire.

The following chart shows the 22 strands that comprise the CTS program and the number of modules available in each strand.

Strand	No. of Modules
1. Agriculture	33
2. Career Transitions	28
3. Communication Technology	33
4. Community Health	31
5. Construction Technologies	46
6. Cosmetology	58
7. Design Studies	31
8. Electro-Technologies	37
9. Energy and Mines	26
10. Enterprise and Innovation	8
11. Fabrication Studies	41
12. Fashion Studies	29
13. Financial Management	14
14. Foods	37
15. Forestry	21
16. Information Processing	48
17. Legal Studies	13
18. Logistics	12
19. Management and Marketing	19
20. Mechanics	54
21. Tourism Studies	24
22. Wildlife	17

## LEVELS OF ACHIEVEMENT

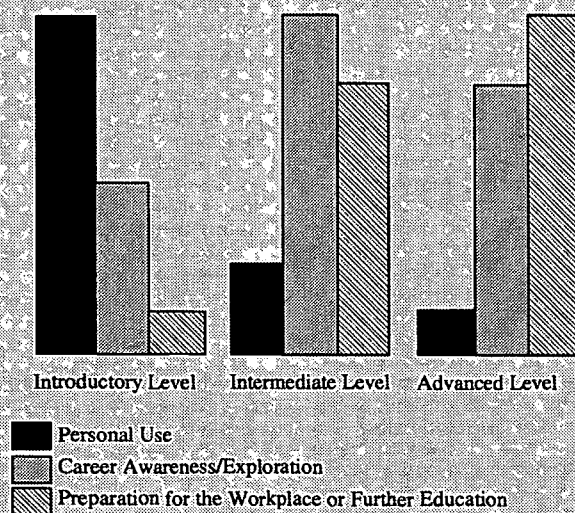
Modules are organized into three levels of achievement: **introductory**, **intermediate** and **advanced**. As students progress through the levels, they will be expected to meet higher standards and demonstrate an increased degree of competence, in both the general learner expectations and the module learner expectations.

**Introductory** level modules help students build daily living skills and form the basis for further learning. Introductory modules are for students who have no previous experience in the strand.

**Intermediate** level modules build on the competencies developed at the introductory level. They provide a broader perspective, helping students recognize the wide range of related career opportunities available within the strand.

**Advanced** level modules refine expertise and help prepare students for entry into the workplace or a related post-secondary program.

The graph below illustrates the relative emphasis on the aspects of career planning at each of the levels.





## CURRICULUM AND ASSESSMENT STANDARDS

**Curriculum standards** in CTS define what students must know and be able to do. Curriculum standards are expressed through general learner expectations for CTS, and through module and specific learner expectations for each strand.

**Assessment standards** define how student performance is to be judged. In CTS, each assessment standard defines the conditions and criteria to be used for assessing the competencies of each module learner expectation. To receive credit for a module, students must demonstrate competency at the level specified by the conditions and criteria defined for each module learner expectation.

Students throughout the province receive a fair and reliable assessment as they use the standards to guide their efforts, thus ensuring they participate more effectively and successfully in the learning and assessment process. Standards at advanced levels are, as much as possible, linked to workplace and post-secondary entry-level requirements.

## TYPES OF COMPETENCIES

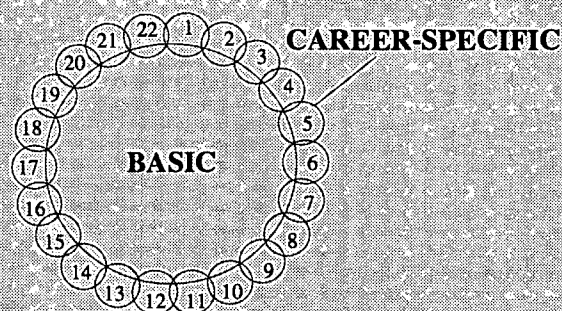
Two types of competencies are defined within the CTS program: basic and career-specific.

**Basic** competencies are generic to any career area and are developed within each module. Basic competencies include:

- personal management; e.g., managing learning, being innovative, ethics, managing resources
- social; e.g., communication, teamwork, leadership and service, demonstrating responsibility (safety and accountability).

**Career-specific** competencies relate to a particular strand. These competencies build daily living skills at the introductory levels and support the smooth transition to the workplace and/or post-secondary programs at the intermediate and advanced levels.

The model below shows the relationship of the two types of competencies within the 22 strands of the CTS program.



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## BASIC COMPETENCIES REFERENCE GUIDE

The chart below outlines basic competencies that students endeavour to develop and enhance in each of the CTS strands and modules. Students' basic competencies should be assessed through observations involving the student, teacher(s), peers and others as they complete the requirements for each module. In general, there is a progression of task complexity and student initiative as outlined in the Developmental Framework\*. As students progress through Stages 1, 2, 3 and 4 of this reference guide, they build on the competencies gained in earlier stages. Students leaving high school should set themselves a goal of being able to demonstrate Stage 3 performance.

*Suggested strategies for classroom use include:*

- having students rate themselves and each other
- using in reflective conversation between teacher and student
- highlighting areas of strength
- tracking growth in various CTS strands
- highlighting areas upon which to focus
- maintaining a student portfolio.

Stage 1— <i>The student:</i>	Stage 2— <i>The student:</i>	Stage 3— <i>The student:</i>	Stage 4— <i>The student:</i>
<b>Managing Learning</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> comes to class prepared for learning</li> <li><input type="checkbox"/> follows basic instructions, as directed</li> <li><input type="checkbox"/> acquires specialized knowledge, skills and attitudes</li> <li><input type="checkbox"/> identifies criteria for evaluating choices and making decisions</li> <li><input type="checkbox"/> uses a variety of learning strategies</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> → → →</li> <li><input type="checkbox"/> follows instructions, with limited direction</li> <li><input type="checkbox"/> sets goals and establishes steps to achieve them, with direction</li> <li><input type="checkbox"/> applies specialized knowledge, skills and attitudes in practical situations</li> <li><input type="checkbox"/> identifies and applies a range of effective strategies for solving problems and making decisions</li> <li><input type="checkbox"/> explores and uses a variety of learning strategies, with limited direction</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> → → →</li> <li><input type="checkbox"/> follows detailed instructions on an independent basis</li> <li><input type="checkbox"/> sets clear goals and establishes steps to achieve them</li> <li><input type="checkbox"/> transfers and applies specialized knowledge, skills and attitudes in a variety of situations</li> <li><input type="checkbox"/> uses a range of critical thinking skills to evaluate situations, solve problems and make decisions</li> <li><input type="checkbox"/> selects and uses effective learning strategies</li> <li><input type="checkbox"/> cooperates with others in the effective use of learning strategies</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> → → →</li> <li><input type="checkbox"/> → → →</li> <li><input type="checkbox"/> demonstrates self-direction in learning, goal setting and goal achievement</li> <li><input type="checkbox"/> transfers and applies learning in new situations; demonstrates commitment to lifelong learning</li> <li><input type="checkbox"/> thinks critically and acts logically to evaluate situations, solve problems and make decisions</li> <li><input type="checkbox"/> → → →</li> <li><input type="checkbox"/> provides leadership in the effective use of learning strategies</li> </ul>
<b>Managing Resources</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> adheres to established timelines; uses time/schedules/planners effectively</li> <li><input type="checkbox"/> uses information (material and human resources), as directed</li> <li><input type="checkbox"/> uses technology (facilities, equipment, supplies), as directed, to perform a task or provide a service</li> <li><input type="checkbox"/> maintains, stores and/or disposes of equipment and materials, as directed</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> creates and adheres to timelines, with limited direction; uses time/schedules/planners effectively</li> <li><input type="checkbox"/> accesses and uses a range of relevant information (material and human resources), with limited direction</li> <li><input type="checkbox"/> uses technology (facilities, equipment, supplies), as appropriate, to perform a task or provide a service, with minimal assistance and supervision</li> <li><input type="checkbox"/> maintains, stores and/or disposes of equipment and materials, with limited assistance</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> creates and adheres to detailed timelines on an independent basis; prioritizes task; uses time/schedules/planners effectively</li> <li><input type="checkbox"/> accesses a range of information (material and human resources), and recognizes when additional resources are required</li> <li><input type="checkbox"/> selects and uses appropriate technology (facilities, equipment, supplies) to perform a task or provide a service on an independent basis</li> <li><input type="checkbox"/> maintains, stores and/or disposes of equipment and materials on an independent basis</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> creates and adheres to detailed timelines; uses time/schedules/planners effectively; prioritizes tasks on a consistent basis</li> <li><input type="checkbox"/> uses a wide range of information (material and human resources) in order to support and enhance the basic requirement</li> <li><input type="checkbox"/> recognizes the monetary and intrinsic value of managing technology (facilities, equipment, supplies)</li> <li><input type="checkbox"/> demonstrates effective techniques for managing facilities, equipment and supplies</li> </ul>
<b>Problem Solving and Innovation</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> participates in problem solving as a process</li> <li><input type="checkbox"/> learns a range of problem-solving skills and approaches</li> <li><input type="checkbox"/> practices problem-solving skills by responding appropriately to a clearly defined problem, specified goals and constraints, by: <ul style="list-style-type: none"> <li>– generating alternatives</li> <li>– evaluating alternatives</li> <li>– selecting appropriate alternative(s)</li> <li>– taking action</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> identifies the problem and selects an appropriate problem-solving approach, responding appropriately to specified goals and constraints</li> <li><input type="checkbox"/> applies problem-solving skills to a directed or a self-directed activity, by: <ul style="list-style-type: none"> <li>– generating alternatives</li> <li>– evaluating alternatives</li> <li>– selecting appropriate alternative(s)</li> <li>– taking action</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> thinks critically and acts logically in the context of problem solving</li> <li><input type="checkbox"/> transfers problem-solving skills to real-life situations, by generating new possibilities</li> <li><input type="checkbox"/> prepares implementation plans</li> <li><input type="checkbox"/> recognizes risks</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> identifies and resolves problems efficiently and effectively</li> <li><input type="checkbox"/> identifies and suggests new ideas to get the job done creatively, by: <ul style="list-style-type: none"> <li>– combining ideas or information in new ways</li> <li>– making connections among seemingly unrelated ideas</li> <li>– seeking out opportunities in an active manner</li> </ul> </li> </ul>



Stage 1— <i>The student:</i>	Stage 2— <i>The student:</i>	Stage 3— <i>The student:</i>	Stage 4— <i>The student:</i>
<b>Communicating Effectively</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> uses communication skills; e.g., reading, writing, illustrating, speaking</li> <li><input type="checkbox"/> uses language in appropriate context</li> <li><input type="checkbox"/> listens to understand and learn</li> <li><input type="checkbox"/> demonstrates positive interpersonal skills in selected contexts</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> communicates thoughts, feelings and ideas to justify or challenge a position, using written, oral and/or visual means</li> <li><input type="checkbox"/> uses technical language appropriately</li> <li><input type="checkbox"/> listens and responds to understand and learn</li> <li><input type="checkbox"/> demonstrates positive interpersonal skills in many contexts</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> prepares and effectively presents accurate, concise, written, visual and/or oral reports providing reasoned arguments</li> <li><input type="checkbox"/> encourages, persuades, convinces or otherwise motivates individuals</li> <li><input type="checkbox"/> listens and responds to understand, learn and teach</li> <li><input type="checkbox"/> demonstrates positive interpersonal skills in most contexts</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> negotiates effectively, by working toward an agreement that may involve exchanging specific resources or resolving divergent interests</li> <li><input type="checkbox"/> negotiates and works toward a consensus</li> <li><input type="checkbox"/> listens and responds to understand, learn, teach and evaluate</li> <li><input type="checkbox"/> promotes positive interpersonal skills among others</li> </ul>
<b>Working with Others</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> fulfills responsibility in a group project</li> <li><input type="checkbox"/> works collaboratively in structured situations with peer members</li> <li><input type="checkbox"/> acknowledges the opinions and contributions of others in the group</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> cooperates to achieve group results</li> <li><input type="checkbox"/> maintains a balance between speaking, listening and responding in group discussions</li> <li><input type="checkbox"/> respects the feelings and views of others</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> seeks a team approach, as appropriate, based on group needs and benefits; e.g., idea potential, variety of strengths, sharing of workload</li> <li><input type="checkbox"/> works in a team or group: <ul style="list-style-type: none"> <li>– encourages and supports team members</li> <li>– helps others in a positive manner</li> <li>– provides leadership/followership as required</li> <li>– negotiates and works toward consensus as required</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> leads, where appropriate, mobilizing the group for high performance</li> <li><input type="checkbox"/> understands and works within the context of the group</li> <li><input type="checkbox"/> prepares, validates and implements plans that reveal new possibilities</li> </ul>
<b>Demonstrating Responsibility</b> <p><b>Attendance</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> demonstrates responsibility in attendance, punctuality and task completion</li> </ul> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> follows personal and environmental health and safety procedures</li> <li><input type="checkbox"/> identifies immediate hazards and their impact on self, others and the environment</li> <li><input type="checkbox"/> follows appropriate/emergency response procedures</li> </ul> <p><b>Ethics</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> makes personal judgements about whether or not certain behaviours/actions are right or wrong</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> recognizes and follows personal and environmental health and safety procedures</li> <li><input type="checkbox"/> identifies immediate and potential hazards and their impact on self, others and the environment</li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> assesses how personal judgements affect other peer members and/or family; e.g., home and school</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> establishes and follows personal and environmental health and safety procedures</li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> assesses the implications of personal/group actions within the broader community; e.g., workplace</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> transfers and applies personal and environmental health and safety procedures to a variety of environments and situations</li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> demonstrates accountability for actions taken to address immediate and potential hazards</li> <li><input type="checkbox"/> analyzes the implications of personal/group actions within the global context</li> <li><input type="checkbox"/> states and defends a personal code of ethics as required</li> </ul>
<b>★ Developmental Framework</b> <ul style="list-style-type: none"> <li>• Simple task</li> <li>• Structured environment</li> <li>• Directed learning</li> </ul>	<ul style="list-style-type: none"> <li>• Task with limited variables</li> <li>• Less structured environment</li> <li>• Limited direction</li> </ul>	<ul style="list-style-type: none"> <li>• Task with multiple variables</li> <li>• Flexible environment</li> <li>• Self-directed learning, seeking assistance as required</li> </ul>	<ul style="list-style-type: none"> <li>• Complex task</li> <li>• Open environment</li> <li>• Self-directed/self-motivated</li> </ul>

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# WILDLIFE

## B. STRAND RATIONALE AND PHILOSOPHY

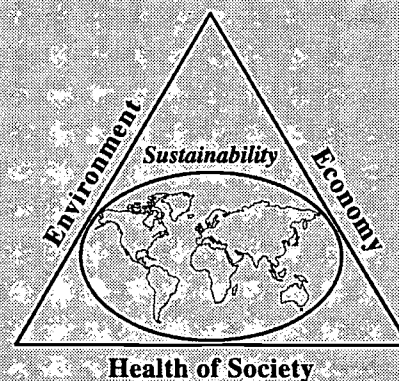
Wildlife is an important part of Canada's heritage. Canada is one of the few places in the world that still contains large natural ecosystems. Natural and wilderness areas of Canada contribute greatly to our quality of life and functioning of the global ecosystem.

But the future of Canada's wildlife cannot be taken for granted. Wild populations and ecosystems have become increasingly vulnerable to human population growth and technological development. Changes to ecosystems, brought about by phenomena such as global warming and the long-range transport of air pollutants, threaten both wildlife and people.

Recently, public concern for wildlife has expanded to embrace any living thing that is part of the natural ecosystem. Discussion of wildlife in this curriculum involves all wild organisms and their habitats—including wild plants, invertebrates and micro-organisms, as well as fishes, amphibians, reptiles, and the birds and mammals traditionally regarded as wildlife.\*

Wildlife, a strand in Career and Technology Studies, will provide opportunities for students to view themselves as part of the global ecosystem. Students will be encouraged to share information

and beliefs regarding environmental sustainability, and recognize the need to make informed choices that limit demands placed on ecosystems to sustainable levels.



Students in Wildlife will develop the knowledge, skills, attitudes, motivation and commitment to work individually and collectively, as private citizens and members of the work force, toward the conservation and responsible use of water, land, air, forests and wildlife. Within the philosophy of Career and Technology Studies, *students in Wildlife will:*

- develop greater awareness of the economic, environmental and social significance of wildlife in Alberta and the rest of the world

\* Wildlife Ministers' Council of Canada. *A Wildlife Policy for Canada*. Ottawa, ON: Environment Canada, 1990.

- describe the characteristics of Alberta's wildlife, and identify trends in wildlife habitats and populations
- describe technologies and research programs designed to preserve biological diversity and enhance the sustainable, ecologically sound management of species and ecosystems
- translate sustainable development and conservation goals into viable plans for managing consumptive and nonconsumptive use of wildlife
- develop competencies and behaviours that have broad application to environmental career paths, and specific application to careers involving Alberta's wildlife.



## STRAND ORGANIZATION

### DEVELOPMENT MODEL

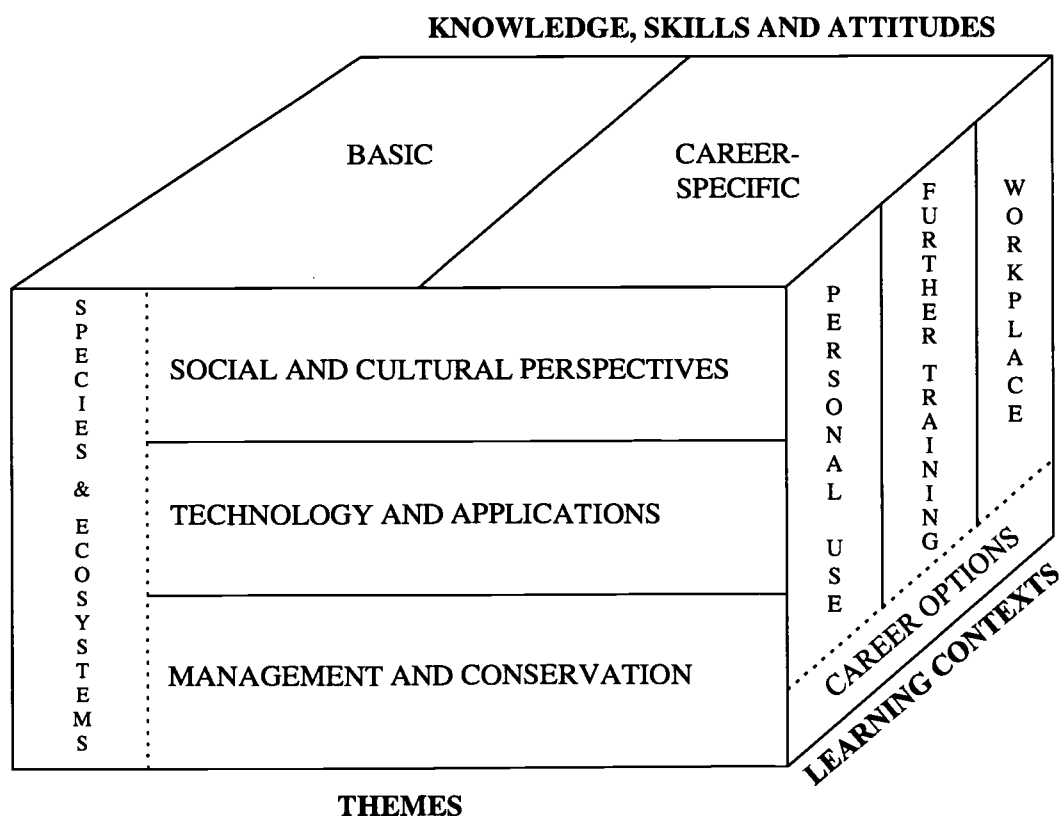
The development model depicts three dimensions that provide a basis for selecting and organizing content within the Wildlife strand.

- The **KNOWLEDGE, SKILLS AND ATTITUDES**, represented on the upper face of the model, provide structure for the course and focus attention on learning goals common to all CTS courses.
- The **LEARNING CONTEXTS**, represented on the right face of the model, foster the development of knowledge and behaviours that will enable students to meet the demands of daily living, further training and the workplace.

- The **THEMES** provide situational and concrete learning experiences that support the development of knowledge, skills and attitudes relevant to each of the learning contexts. Each theme focuses attention on the sustainable use of species and ecosystems. Blended together, the themes enable students to understand how it is possible to fulfill social, cultural, aesthetic and economic goals through resource development, while embracing a conservation ethic so as to maintain essential ecological processes, genetic diversity and an adequate resource base for future generations.

### LEVELS

The Wildlife curriculum is organized into three levels of learning: introductory, intermediate and advanced.

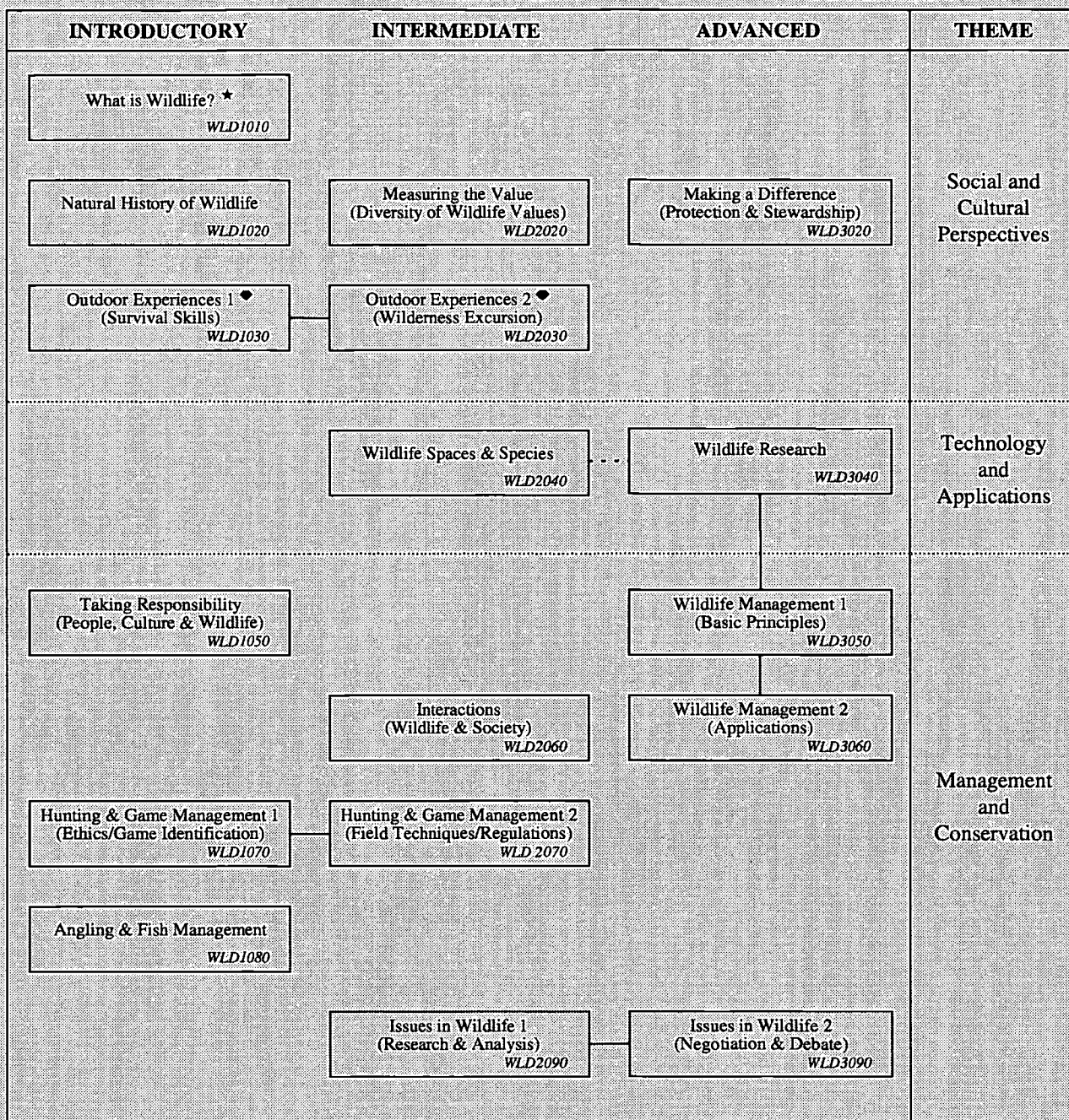


Introductory level modules develop knowledge, skills and attitudes necessary for functioning in the natural environment. Students examine their relationship with the environment, observe trends in wildlife populations and habitats, and consider the impacts of various pursuits on local species and ecosystems.

Intermediate and advanced level modules develop more specialized knowledge and skills regarding wildlife species, sustainable ecosystems and management practices. Students consider the social, economic and environmental significance of wildlife and gather information regarding both intended and unintended outcomes of particular management strategies.

# SCOPE AND SEQUENCE

# WILDLIFE



- Prerequisite      . . . . Recommended sequence  
 ★ Module provides a strong foundation for further learning in this strand.  
 ♦ Refer to specific modules for additional prerequisites.

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## MODULE DESCRIPTIONS

### **Module WLD1010: What is Wildlife?**

Students demonstrate knowledge of wildlife and ecosystems, and examine the need to manage and conserve wildlife.

### **Module WLD1020: Natural History of Wildlife**

Students investigate the diversity of Canadian wildlife in terms of structure, behaviour and habitat, and compare Alberta wildlife with wildlife in other parts of the world.

### **Module WLD1030: Outdoor Experiences 1 (Survival Skills)**

Students demonstrate the basic skills required for responsible participation in a range of outdoor activities.

### **Module WLD1050: Taking Responsibility (People, Culture & Wildlife)**

Students explain the significance of wildlife in society, examine relationships among humans and wildlife, and research potential career opportunities in wildlife-related fields.

### **Module WLD1070: Hunting & Game Management 1 (Ethics/Game Identification)**

Students explain the role of regulated hunting in game management, identify Alberta's game animals, and demonstrate knowledge and skills that ensure safe and comfortable experiences in the outdoors.

### **Module WLD1080: Angling & Fish Management**

Students explain the role of recreational fishing in the management and conservation of fish resources, and demonstrate knowledge of the responsible practices required for fishing or related outdoor activities.

### **Module WLD2020: Measuring the Value (Diversity of Wildlife Values)**

Students assess the significance of wildlife in society, analyze relationships between humans and wildlife, and research career opportunities in wildlife-related fields.

### **Module WLD2030: Outdoor Experiences 2 (Wilderness Excursion)**

Students plan, prepare for and conduct an extended outdoor wilderness trip.

### **Module WLD2040: Wildlife Spaces & Species**

Students present the results of research on wildlife spaces and species in Alberta and other parts of the world, and compare different strategies used in wildlife management.

### **Module WLD2060: Interactions (Wildlife & Society)**

Students explain how human populations interact with wildlife, and describe management strategies that enable wildlife and society to coexist.

### **Module WLD2070: Hunting & Game Management 2 (Field Techniques/Regulations)**

Students demonstrate knowledge of the basic parts and safe handling of bows, arrows and firearms, and explain the legal responsibilities of the sports person.

### **Module WLD2090: Issues in Wildlife 1 (Research & Analysis)**

Students examine a range of Canadian and global wildlife issues, and present the results of research on one or more issues concerning wildlife in Canada.

### **Module WLD3020: Making a Difference (Protection & Stewardship)**

Students explain how human populations and wildlife affect each other, describe management strategies that enable humans and wildlife to coexist, and demonstrate individual and shared actions that foster environmental stewardship.

### **Module WLD3040: Wildlife Research**

Students explain applications of the wildlife research process, and conduct experimental research on a wildlife space or species.

### **Module WLD3050: Wildlife Management 1 (Basic Principles)**

Students describe the functions and processes of wildlife management, and identify issues that may affect the development of a wildlife management plan.



**Module WLD3060: Wildlife Management 2**

**(Applications)**

Students develop and present a plan for managing a wildlife space or species.

**Module WLD3090: Issues in Wildlife 2**

**(Negotiation & Debate)**

Students examine the complexity of wildlife issues affecting Alberta and the rest of the world, and demonstrate individual and shared actions that foster sustainable management of wildlife.

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## SECTION C: PLANNING FOR INSTRUCTION

CTS provides increased opportunity for junior and senior high schools to design courses based on the needs and interests of their students and the circumstances within the school and community. Some strands may be appropriately introduced at the junior high school level. Other strands are more appropriately introduced at the senior high school level or to Grade 9 students. Refer to this section for recommendations regarding the Wildlife strand, or the *Career & Technology Studies Manual for Administrators, Counsellors and Teachers* for a summary of the recommended grade levels for each strand.

### PLANNING FOR CTS

#### Defining Courses

Schools determine which strands and modules will be offered in a particular school, and will combine modules into courses.

Each module was designed for approximately 25 hours of instruction. However, this time frame is only a guideline to facilitate planning. The CTS curricula are competency based, and the student may take more or less time to gain the designated competencies within each module.

A course will usually consist of modules primarily from the same strand but, where appropriate, may include modules from two or more strands. Refer to the *Career & Technology Studies Manual for Administrators, Counsellors and Teachers* (Appendix 4) for more information on course names and course codes.

Module selection and sequencing should consider:

- prerequisite(s)
- supporting module(s) (other CTS modules that may enhance the learning opportunity if offered with the module)
- module parameters
  - instructional qualifications, if specialized
  - equipment and facility requirements, if specialized.

The module parameters are defined for each module in Sections D, E and F of this Guide.

#### Degree of Flexibility

The CTS program, while designed using the modular structure to facilitate flexible timetabling and instructional delivery, does not mandate the degree of flexibility a school or teacher will offer. The teacher and school will determine the degree of flexibility available to the student. Within the instructional plan established by the school, the student may:

- be given the opportunity to progress at a rate that is personally challenging
- have increased opportunity to select modules that develop competencies he or she finds most relevant.

#### Integrating Basic Competencies

The basic competencies relate to managing learning and resources, problem solving and innovation, communicating effectively, working with others and demonstrating responsibility are developed throughout the CTS program, and are within each module.

Assessment of student achievement on the basic competencies is integrated throughout the other module learner expectations. Refer to Section G (Assessment Tools) of this Guide for the description of student behaviours expected at each of the four developmental stages defined for the basic competencies.

Assessment of basic competencies could include input and reflection involving the student, teacher(s), peers and others. Description of the observed behaviour could be provided through a competency profile for the module. Positive, ongoing interaction between the student and teacher will support motivation for student growth and improvement.

## Assessing Student Achievement

Assessing student competency is a process of gathering information by way of observations of process, product and student interaction.

Where appropriate, assessment tools have been defined to assist the teacher and student in the assessment. Refer to Section G (Assessment Tools) of this Guide for copies of the various tools (worksheets, checklists, sample questions, etc.).

A suggested emphasis for each module learner expectation has also been established. The suggested emphasis provides a guideline to help teachers determine time allocation and/or the appropriate emphasis for each MLE and student grade.

## Recognizing Student Achievement

At the high school level, successful demonstration of the exit-level competencies in a module qualifies the student for one credit. Refer to Section A of this Guide for more detailed information about how curriculum and assessment standards are defined in CTS. Refer to the *Career & Technology Studies Manual for Administrators, Counsellors and Teachers* (Appendix 12) for more information on how student achievement can be recognized and reported at the school and provincial levels.

## Portfolios

When planning for instruction and assessment, consider a portfolio as an excellent tool to provide evidence of a student's effort, progress and achievement. Portfolios will aid students in identifying skills and interest. They also provide the receiving teacher, employer and/or post-secondary institution proof of a student's accomplishments. The make-up and evaluation of the portfolio should be a collaborative agreement between the student and teacher.

## Resources

A comprehensive resource base, including print, software and audio-visual, has been identified to support CTS strands. It is intended that these resources will form the basis of a resource centre, encouraging teachers and students to access a wide selection of resources and other information sources throughout the learning process. Unless otherwise noted, these resources are considered to be suitable for both junior and senior high school students.

Authorized resources may be obtained from the Learning Resources Distributing Centre or directly from the publisher or distributor. Refer to Section I (Learning Resource Guide) of this Guide for the complete resource list including curriculum correlations and resource annotations. Additional sources refer to noncommercial or government agencies that offer resources that may be of assistance in this strand.

## Student Learning Guides

In addition to the resources, sample Student Learning Guides are available (refer to Section J of this Guide). These samples, designed for individual student or small group use, provide an instructional plan for selected modules and include the following components:

- Why take this module?
- What are the entry-level competencies?
- What are the exit-level competencies?
- What resources may be accessed?
- What assignments/activities must be completed?
- What are the timelines?
- How will the final mark be calculated?

Sample Student Learning Guides have been developed for the following modules in Wildlife:

- Natural History of Alberta Wildlife
- Wildlife Spaces & Species
- Wildlife Management 1.

## PLANNING FOR WILDLIFE

The following suggestions are provided to assist teachers and school and school system administrators as they plan to deliver modules from the Wildlife strand.

### Selecting Modules

The scope and sequence chart in Section B provides an overview of the Wildlife modules, indicating prerequisites and theme areas. Brief descriptions of the modules follow the scope and sequence chart in Section B.

Course planning should take into consideration module sequences that link with both physical and human resources present in the school and community. Although not required, it is recommended that WLD1010: What is Wildlife? be a prerequisite/corequisite to all modules in the Wildlife strand.

### Wildlife in Junior High

The introductory level modules may be offered at the junior high level. As each school and community will vary in terms of available resources, it is important to consider potential education partners prior to selecting module sequences.

The number of modules will vary according to time available throughout Grades 7, 8 and 9. A module do not have to be completed in a given school year at the junior high level. Modules may be combined into courses and offered within a school year or over a span of a few years.

Two sample courses based on introductory level modules are outlined as follows.

### Sample A: 50 hours of instruction

COURSE EMPHASIS
Introduction to Wildlife
MODULES
What is Wildlife? (WLD1010) Natural History of Wildlife (WLD1020)
RATIONALE/KEY LEARNINGS
Students develop an understanding of wildlife and ecosystems, examine the need to manage and conserve wildlife, and conduct research on the structure, behaviour and habitat of wildlife species present in Alberta.  The course complements the junior high core Science program and complementary Environmental and Outdoor Education program, and can be linked with other CTS strands including Agriculture, Forestry and Tourism Studies.

### Sample B: 75 hours of instruction

COURSE EMPHASIS
Personal/Recreational Significance
MODULES
What is Wildlife? (WLD1010) Outdoor Experiences 1 (WLD1030) Taking Responsibility (WLD1050)
RATIONALE/KEY LEARNINGS
Students develop an understanding of wildlife and ecosystems, investigate the significance of wildlife in society, and develop skills required for responsible participation in a range of outdoor activities that have minimal impact on the environment.  The course complements the junior high core Science program and complementary Environmental and Outdoor Education program, and can be linked with other CTS strands including Agriculture, Community Health, Forestry and Tourism Studies.

Where appropriate, junior high school students may also take intermediate level modules, particularly in the Technology and Applications theme.

### ***Wildlife in Senior High***

All introductory, intermediate and advanced level modules may be offered to senior high students. Three sample courses, based on intermediate and advanced level modules and designed to be delivered to senior high school students, are outlined below.

#### ***Sample C: 75 hours of instruction***

<b>COURSE EMPHASIS</b>
Consumptive Use (no previous experience)
<b>MODULES</b>
Measuring the Value (WLD2020) Hunting & Game Management 1 (WLD1070) Hunting & Game Management 2 (WLD2070)
<b>RATIONALE/KEY LEARNINGS</b>
Students develop an appreciation of the significance of wildlife in society, examine the role of regulated hunting in game management, identify Alberta's game animals, and develop an understanding of safe hunting practices and legal responsibilities of the hunter.  This course can be linked with other CTS strands including Agriculture, Career Transitions, Community Health, Forestry and Tourism Studies.

#### ***Sample D: 100 hours of instruction***

<b>COURSE EMPHASIS</b>
Recreation and Tourism (assuming junior high background)
<b>MODULES</b>
Interactions (WLD2060) Outdoor Experiences 1 (WLD1030) Outdoor Experiences 2 (WLD2030) Making a Difference (WLD3020)
<b>RATIONALE/KEY LEARNINGS</b>
Students consider ways in which human population growth and land use affect wildlife, develop plans for and conduct an extended outdoor wilderness trip having minimal environmental impact, and demonstrate individual and shared actions that foster environmental stewardship.  This course can be linked with other CTS strands including Agriculture, Career Transitions, Community Health, Forestry and Tourism Studies.

#### ***Sample E: 125 hours of instruction***

<b>COURSE EMPHASIS</b>
Wildlife Conservation and Management (assuming junior high background)
<b>MODULES</b>
Wildlife Spaces and Species (WLD2040) Wildlife Research (WLD3040) Wildlife Management 1 (WLD3050) Wildlife Management 2 (WLD3060) Issues in Wildlife 2 (WLD3090)
<b>RATIONALE/KEY LEARNINGS</b>
Students compare different strategies used to manage wildlife, conduct experimental research on a wildlife space or species, develop and present plans for managing a wildlife space or species, and examine the complexity of wildlife issues in Alberta and the rest of the world.  This course can be linked with other CTS strands including Agriculture, Career Transitions, Legal Studies, Forestry and Tourism Studies.

Modules could also be grouped into comprehensive courses that develop competencies relevant to career opportunities within a specific industry.

### Organizing for Learning

A “learn by doing” approach is recommended for the Wildlife strand. Essentially, the teacher’s role becomes that of guide and partner in the learning process. The “learn by doing” approach requires the teacher to be facilitator and coach, rather than subject-based expert, as students actively participate in learning by doing and discovering.

Small group instruction is a good way to foster learning by doing and discovering. Small groups enable students to be active participants in learning, and develop independent and responsible learning habits. As students work in small group situations they will share information, solve problems, develop consensus and help each other learn content and processes.

The community has a key role in education and can be an effective partner in the learning process. The use of community members and resources should be integrated into course planning. Business, industry, post-secondary and government agencies offer a wide range of services and resources, as do local clubs, service groups and institutions. When planning for the use of community resources, teachers should ensure that related presentations and/or activities:

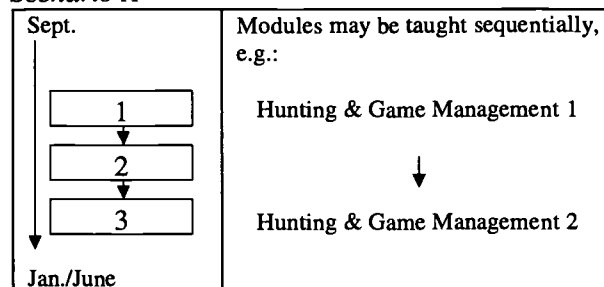
- are consistent with student knowledge and skill levels
- demonstrate sound pedagogy
- are exemplary of approved health and safety standards
- provide a balanced approach to curriculum topics and related issues.

Before selecting modules, teachers should check the module parameters outlined in each module (see Sections D, E and F of this Guide).

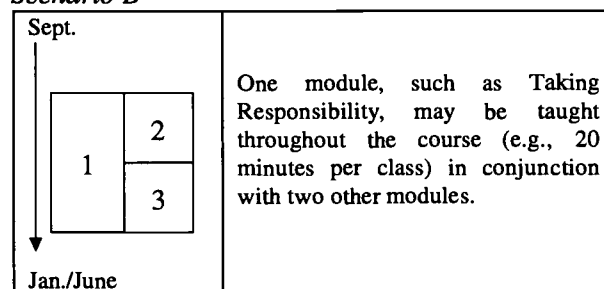
Modules can be delivered sequentially, concurrently or combined. For example, although

the modules from the Technology and Applications theme are sequential, they can be combined with modules from the Social and Cultural Perspectives theme or the Management and Conservation theme.

#### Scenario A

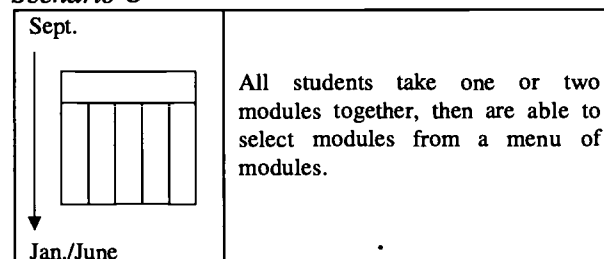


#### Scenario B

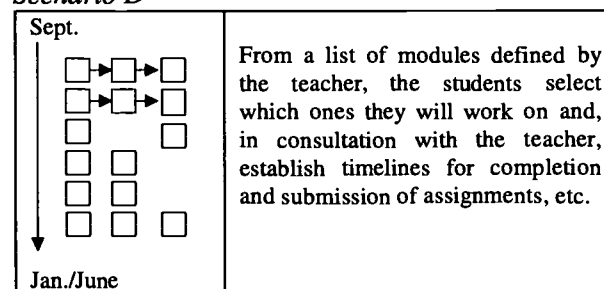


Teachers can also allow students to progress at a rate that is personally challenging; e.g.:

#### Scenario C

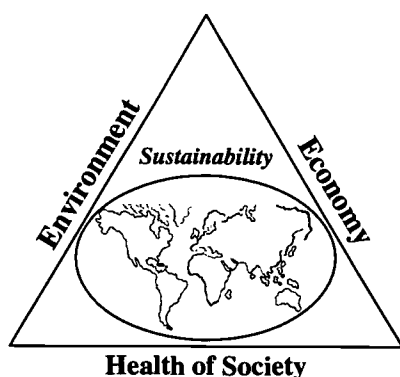


#### Scenario D



Plans for learning must address social, environmental and economic perspectives related

to the sustainable management of species and ecosystems and provide opportunities for students to become involved in learning experiences that reflect a broad understanding of wildlife-related issues. Presentations of course content that reflect a singular or narrow view of social, economic or environmental concerns are not consistent with learner expectations and must be avoided.



As in all CTS strands, students will identify, explore and prepare for future career opportunities. It is recommended that course planning include the integration of relevant career investigations throughout each module, rather than as a singular or isolated study. Career profiles, interviews and job shadowing will acquaint students with the many technical and professional careers associated with Alberta's wildlife.

### Instructional Qualifications

Responsibility for instructional planning and assessment of courses in Wildlife will be assumed by Alberta certified teachers. A background in science and/or natural resource management will be an asset to those who provide instruction in Wildlife modules, particularly at the intermediate and advanced levels. Teachers may find it desirable to access sources of instructional support available from relevant government agencies (e.g., Alberta Environmental Protection, Parks Canada), professional associations and consultants, and related industry (e.g., agriculture, forestry, tourism).

To ensure compliance with safety and industry standards, some modules require that components of instruction be provided by person(s) having

additional credentials granted by industry, government or community organizations. Wildlife modules requiring additional instructor qualifications are identified in the chart below.

MODULE	ADDITIONAL INSTRUCTOR QUALIFICATIONS	
	Required	Recommended
WLD1030: Outdoor Experiences 1	Standard Level First Aid Certificate	First Aid in the Wilderness Certificate
WLD1070: Hunting & Game Management 1	Registered Alberta Conservation and Hunter Education Program Instructor  Standard Level First Aid Certificate	
WLD1080: Angling & Fish Management	Registered Alberta Fishing Education Program Instructor  Standard Level First Aid Certificate	
WLD2030: Outdoor Experiences 2	Standard Level First Aid Certificate	First Aid in the Wilderness Certificate
WLD2070: Hunting & Game Management 2	Registered Alberta Conservation and Hunter Education Program Instructor  Canadian Firearms Safety Course	

Refer to the corresponding module in Section D, E or F of this Guide for further information regarding each instructor qualification. In some instances it may be desirable to have other qualified individuals in the community work with the teacher to deliver modules (or parts thereof) that require additional instructor qualifications.

### Sensitive Issues

Some Wildlife modules contain topics of a sensitive nature. Teachers will need to be respectful of family and community values in selecting appropriate modules for courses in Wildlife. Modules that reference the consumptive use of wildlife and examine hunting/fishing as methods of managing wildlife populations (i.e., WLD1070, WLD1080, WLD2070) must be selected and delivered with particular care. A school board motion and parental consent is required prior to delivering instruction in the safe



handling of bows, arrows and firearms (i.e., WLD2070).

Ethical issues surrounding the sustainable management of species and ecosystems may also be sensitive for some students (i.e., WLD2090, WLD3090). Emphasis should be placed on a “process” for conflict analysis and not on particular positions that may be expressed.

For further clarification of provincial policy on sensitive issues, refer to Alberta Education’s Policy on Controversial Issues (*Alberta Education Policy Manual*, 1996). Teachers and administrators should also review jurisdictional policies related to sensitive issues.

### **Health, Safety and Related Legislation**

Facilities used to support a Wildlife program must ensure a safe learning/working environment. Students must be aware of federal, provincial and local regulations governing the tasks they perform, and establish appropriate personal and environmental health and safety procedures in modules that involve:

- the use of specialized hand/power equipment
- the handling and storage of hazardous materials
- outdoor trips and field-based investigation.

Students must understand immediate and potential hazards associated with the tasks they perform, and the possible impact of these hazards on self, others and the environment.

Of particular significance from the perspective of health and safety are modules that involve outdoor trips in wilderness environments (e.g., WLD1030, WLD2030). These modules require that both student and instructor have prior knowledge of survival techniques and are able to provide first aid in wilderness locations.

For additional information on health and safety standards, refer to the *Career Technology Studies Manual for Administrators, Counsellors and Teachers* (Appendix 13).

### **Addressing Safety in Off-Campus Excursions**

Outdoor trips and field-based investigations are recommended and should be an important part of teaching and learning throughout the Wildlife strand. Safety must be a prime consideration in planning off-campus learning experiences. Both teachers and students should engage in activities commensurate with their level of training and ability. Adequate instructional support, guidance and supervision must be provided at all times. Local jurisdiction and school policies must be understood by principals, teachers, parents, supervisors and students.

### **Preparation and Risk Anticipation**

The preparation stage is an important part of any off-campus learning experience. At this stage of planning, potential risks can be anticipated and either avoided or moderated. The preparation stage should focus attention on:

- trip administration, including the use of parental permission forms, health information forms, school/system authorization forms and accident report forms as required
- a review of laws and regulations relevant to the learning site and activities that will be undertaken
- assessment of the learning site in terms of potential hazards and risks that may be present
- group size and the level of supervision that will be required (i.e., supervisor/student ratio)
- a briefing of parents, school administrators, government/industry authorities or others who should be informed regarding itineraries, participants and emergency response plans
- pre-trip logistics, including transportation, equipment, facility and departure date/time considerations
- student preparation, including the development of background knowledge/experience and training in specific skill areas.



## ***On-Site Risk Management***

Safety and risk management involves exercising situation-specific judgement throughout the course of off-campus learning. Judgement is the product of experience, and may include recognizing factors such as dangers imposed by equipment or animals, deteriorating weather, a decline in physical strength, or a more challenging task. Many of the hazard recognition skills can be taught in the classroom in the preparation stage.

A significant aspect of on-site risk management is group management. Teachers can exercise appropriate group management strategies by focusing attention on:

- pacing, including speed of travel, rest stops, distance travelled and fitness level of students
- maintaining a safe distance for observations
- group control, including position of leader, signal systems and buddy systems
- the establishment of group rules and norms
- clearly defined task allocations for each student
- objective hazard recognition in the field, including machinery and equipment, weather, terrain, flora and fauna
- subjective hazard recognition in the field, including level of group energy and level of cooperation.

## ***Emergency Response***

If students have been well prepared for field-based learning experiences and appropriate group management strategies exercised, the teacher will have maximized opportunities for effective response to an emergency situation. An effective emergency response action plan should include consideration of:

- a suitable approach to the accident site
- first-aid supplies and techniques
- a strategy for signalling assistance
- an evacuation plan
- group management throughout the emergency situation.

## ***Identifying Linkages***

Section H of this Guide describes linkages within CTS and with core and complementary programs.

In particular, teachers should be aware of the linkages of Wildlife with biology components in the junior and senior high science program, and also with environmental components in the junior high Environmental and Outdoor Education Program. The Wildlife strand is designed to reinforce, extend and apply related learnings in these courses. Collaborative planning at the school level will ensure meaningful learning experiences through effective integration of these courses.

The Career Transitions strand of CTS provides project, practicum, safety and leadership modules that may be combined with modules in Wildlife to increase opportunity for students to develop expertise, refine their competencies and/or obtain credentials.

## ***Using "Project" Modules***

Students may use one or more of the 10 project modules to expand learning beyond the competencies outlined in particular Wildlife modules. For example, a wildlife research project or environmental stewardship venture may require more than the 25, 50 or 75 hours available through modules by that name. In these instances, project modules from the Career Transitions strand may be accessed so as to provide sufficient time for completion of learning and the task. For each project module, the teacher and student establish specific learning outcomes, assessment criteria, resources and timelines.

## ***Using "Practicum" Modules***

Students may use one or more of the four practicum modules to extend the competencies developed in particular Wildlife module(s) in order to attain a recognized credential offered by an agency external to the school. For example, students who plan to work in remote wilderness areas may wish to access a practicum module from the Career Transitions strand in order to obtain a

“First Aid in the Wilderness” certificate. Practicum modules must be supervised by both a qualified teacher and an experienced professional authorized to supervise trainees for the credential.

Project and practicum modules are **not** designed to be offered as distinct courses and should **not** be used to extend Work Experience 15, 25 and 35 courses.

### **Improving Smooth Transitions to the Workplace and/or Post-secondary Programs**

Refer to Section H of this Guide for potential transitions students may make into:

- the workplace
- related post-secondary programs or other avenues for further learning.

## MODULE CURRICULUM AND ASSESSMENT STANDARDS:

### SECTION D: INTRODUCTORY LEVEL

The following pages define the curriculum and assessment standards for the introductory level of Wildlife.

Introductory level modules help students build daily living skills and form the basis for further learning. Introductory modules are developed for students who have no previous experience in the strand.

Module learner expectations define the competencies a student must demonstrate to achieve success in a module. Assessment standards define the criteria and conditions to be used for assessing the competencies defined in the module learner expectations.

Specific learner expectations provide a detailed framework for instruction to help students build the competencies defined in the module learner expectations. Additional information and suggestions for instruction are provided in the Notes column; teachers may wish to use this space to record their ideas for instruction or student projects.

Module WLD1010: What Is Wildlife? .....	D.3
Module WLD1020: Natural History of Wildlife .....	D.9
Module WLD1030: Outdoor Experiences 1 (Survival Skills) .....	D.13
Module WLD1050: Taking Responsibility (People, Culture & Wildlife) .....	D.19
Module WLD1070: Hunting & Game Management 1 (Ethics/Game Identification) .....	D.23
Module WLD1080: Angling & Fish Management .....	D.29

**MODULE WLD1010: WHAT IS WILDLIFE?****Level:** Introductory**Theme:** Social and Cultural Perspectives**Prerequisite:** None**Module Description:** Students demonstrate knowledge of wildlife and ecosystems, and examine the need to manage and conserve wildlife.**Module Parameters:** Access to a science laboratory and outdoor environment.**Curriculum and Assessment Standards**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>provide a definition of wildlife</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>a comprehensive definition of wildlife based on: <ul style="list-style-type: none"> <li>current wildlife policies established for Alberta and Canada</li> <li>personal experience with and response to wildlife.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Knowledge/Application Assessment: A Definition for Wildlife, WLD1010-1</i>  A Wildlife Policy for Canada, <i>Canadian Wildlife Service</i></p> <p><i>Standard</i>  Address 6 of the criteria for a definition of wildlife (as identified in WLD1010-1) to a standard of 1 on the rating scale</p> <ul style="list-style-type: none"> <li>identifying and describing the range of wildlife species, both plant and animal, that are present in Alberta.</li> </ul> <p><i>Assessment Tool</i>  Alberta Wildlife Viewing Guide  Nature Alberta: An Illustrated Guide to Common Plants and Animals</p> <p><i>Standard</i>  Identify the common names, distinguishing characteristics and habitats of 20 different Alberta wildlife species; identification to include wild plants, invertebrates, fish, amphibians, reptiles, birds and mammals</p>	20

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## MODULE WLD1010: WHAT IS WILDLIFE? (continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>describe interrelationships among ecosystem components</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>preparing a diagram of a food web or energy chain that illustrates the interrelatedness of ecosystem components.</li> </ul> <p><i>Assessment Tool</i>  <i>Sample Food Chain Scenario, WLD1010-2</i></p> <p><i>Standard</i>  <i>Illustrate the interrelatedness of biotic and abiotic ecosystem components; include decomposers, producers and consumers</i></p> <ul style="list-style-type: none"> <li>identifying and explaining six limiting factors and their affects on wildlife populations.</li> </ul> <p><i>Assessment Tool</i>  <i>Knowledge/Application Assessment: Limiting Factors for Wildlife Populations, WLD1010-3</i></p> <p><i>Standard</i>  <i>Respond to a standard of 1 on the rating scale</i></p> <ul style="list-style-type: none"> <li>conducting a laboratory or field investigation that monitors the effects of environmental/limiting factors on a wildlife population.</li> </ul> <p><i>Assessment Tool</i>  <i>Lab or Field Investigation: Limiting Factors for Wildlife Populations, WLD1010-4</i></p> <p><i>Standard</i>  <i>Perform investigation to a standard of 1 on the rating scale</i></p> <ul style="list-style-type: none"> <li>a teacher-prepared assessment in which the student demonstrates knowledge of basic ecosystem concepts.</li> </ul> <p><i>Assessment Tool</i>  <i>Ecosystems (Teacher Resource Guide)</i>  <i>Sample Assessment Items: Ecosystem Concepts, WLD1010-5</i></p> <p><i>Standard</i>  <i>Response indicating 60% mastery</i></p>	60

## MODULE WLD1010: WHAT IS WILDLIFE? (continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>explain the difference between wildlife conservation and preservation</li> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>a presentation or report that: <ul style="list-style-type: none"> <li>provides definitions and Alberta examples of wildlife conservation and preservation</li> <li>summarizes the views of three or more people interviewed regarding wildlife conservation and preservation</li> <li>identifies relevant conservation, preservation and/or sustainable management issues cited in a current wildlife periodical (e.g., <i>Western Sportsman</i>, <i>Outdoor Edge</i>, <i>Equinox</i>, <i>Canadian Geographic</i>, <i>Environmental Views</i>), television documentary or news report.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Presentations/Reports: Introductory Level, WLDPRE-1</i>  <i>Sample Interview Project: Conservation and Preservation, WLD1010-6</i></p> <p><i>Standard</i>  <i>Achieve a minimum rating of 1 on the rating scale for Presentations/Reports</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tools</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>20</p> <p>Integrated throughout</p>

# MODULE WLD1010: WHAT IS WILDLIFE? (continued)

Concept	Specific Learner Expectations	Notes
Awareness	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• write a definition of wildlife based upon personal experience and the results of research</li> <li>• give evidence of diversity among Alberta's wildlife species.</li> </ul>	<p>Subscribe to <i>Update</i> (a magazine for environmental educators published by FEESA), <i>Equinox</i> or <i>Environmental Views</i>.</p> <p>See <i>A Wildlife Policy for Canada</i> and <i>The Status of Wildlife in Alberta</i>.</p> <p>Research different definitions of wildlife; emphasize that according to wildlife policy in Canada, wildlife includes both animal and plant life.</p> <p>Make special note of Alberta's native species of flora and fauna.</p>
Ecosystems	<ul style="list-style-type: none"> <li>• identify biotic and abiotic components of a local ecosystem; e.g.:               <ul style="list-style-type: none"> <li>– soil, water and air characteristics</li> <li>– climate</li> <li>– plant and animal species</li> <li>– micro-organisms</li> </ul> </li> <li>• explain the interrelatedness of components within a habitat; e.g.:               <ul style="list-style-type: none"> <li>– interrelationships among food, water, shelter and space</li> <li>– relationship of soil, water and air characteristics to plant and animal health</li> </ul> </li> <li>• analyze relationships among wildlife species; e.g.:               <ul style="list-style-type: none"> <li>– role of producers, consumers and decomposers</li> <li>– food webs and energy chains</li> <li>– social organizations and species competition</li> </ul> </li> </ul>	<p>See "A Guide to the Ecosystem Concept" (<i>Project Wild</i>, p. 439).</p> <p>Inventory biotic and abiotic ecosystem components.</p> <p>Given a picture/ photograph of a local habitat altered naturally or by humans, discuss possible consequences for three wildlife species.</p> <p>Draw food webs/ pyramids and energy chains using <i>Natural Regions of Alberta</i> posters.</p>



## MODULE WLD1010: WHAT IS WILDLIFE? (continued)

Concept	Specific Learner Expectations	Notes
Ecosystems (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>identify environmental factors that affect wildlife populations; e.g.: <ul style="list-style-type: none"> <li>natural versus non-natural mortality</li> <li>climatic conditions</li> <li>pollution</li> <li>loss of habitat</li> </ul> </li> <li>relate the concepts of “limiting factors” and “carrying capacity” to wildlife populations</li> <li>identify factors associated with adaptation and change in species.</li> </ul>	<p>Consider factors that determine carrying capacity.</p> <p>See “Checks and Balances” and “Deadly Links” (activities in <i>Project Wild</i>).</p> <p>Discuss natural and human-caused changes in habitat, and the effects of these changes on wildlife species.</p> <p>Consider ecosystem components/relationships of particular significance during the winter season.</p> <p>See <i>Project Wild</i> (“Oh Deer - How Many Bears Can Live in the Forest?”).</p> <p>Distinguish between structural, physiological and behavioural adaptation.</p>
Wildlife Conservation and Preservation	<ul style="list-style-type: none"> <li>compare wildlife conservation with preservation</li> <li>explain how the well-being of both humans and wildlife depend upon the quality of the natural environment</li> <li>state differing opinions regarding wildlife conservation, preservation and sustainable management of the environment.</li> </ul>	<p>Cite Canadian examples of conservation and preservation.</p>

**MODULE WLD1020: NATURAL HISTORY OF WILDLIFE****Level:** Introductory**Theme:** Social and Cultural Perspectives**Prerequisite:** None**Module Description:** Students investigate the diversity of Canadian wildlife in terms of structure, behaviour and habitat, and compare Alberta wildlife with wildlife in other parts of the world.**Module Parameters:** Access to relevant government and community resources.**Curriculum and Assessment Standards**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>describe the diversity of Canadian wildlife</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>describing diversity among: <ul style="list-style-type: none"> <li>major groups of Canadian wildlife, including plants, insects, fish, amphibians, reptiles, birds and mammals</li> <li>species within each major group of Canadian wildlife</li> <li>the distribution and habitats of Canadian wildlife.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Knowledge/Application Assessment: Diversity in Wildlife, WLD1020-1</i>  Alberta Wildlife Viewing Guide  Nature Alberta: An Illustrated Guide to Common Plants and Animals</p> <p><i>Standard</i>  Respond to a standard of 1 on the rating scale</p>	25
<ul style="list-style-type: none"> <li>explain the structure, behaviour and habitat of an Alberta wildlife species</li> </ul>	<ul style="list-style-type: none"> <li>completing all components of a research project on the structures, behaviours and habitats of one Alberta wildlife species.</li> </ul> <p><i>Assessment Tool</i>  <i>Research Process: An Alberta Wildlife Species, WLD1020-2</i></p> <p><i>Standard</i>  Complete research to a standard of 1 on the rating scale</p>	50

# **MODULE WLD1020: NATURAL HISTORY OF WILDLIFE (continued)**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>compare and contrast Alberta's wildlife with wildlife in other parts of the world</li> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>given one of Alberta's six natural regions, designing a "critter" (i.e., wildlife species) that reflects structural, physiological and behavioural adaptations suited to that environment.</li> </ul> <p><i>Assessment Tool</i>  <i>Project Assessment: "Design a Critter,"</i>  WLD1020-3</p> <p><i>Standard</i>  <i>Complete all tasks to a standard of 1 on the rating scale</i></p> <ul style="list-style-type: none"> <li>a presentation or report that compares two similar ecosystems in different parts of the world with respect to: <ul style="list-style-type: none"> <li>Earth history</li> <li>geography/climate</li> <li>number of different species</li> <li>relative number of niches.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Presentations/Reports: Introductory Level,</i>  WLDPRE-1</p> <p><i>Standard</i>  <i>Achieve a minimum rating of 1 on the rating scale for Presentations/Reports</i></p> <ul style="list-style-type: none"> <li>defining biodiversity, and suggesting possible reasons for differences within and among wildlife species/spaces in Alberta as compared to those in other parts of the world.</li> </ul> <p><i>Assessment Tool</i>  <i>Knowledge/Application Assessment: Biodiversity,</i>  WLD1020-4</p> <p><i>Standard</i>  <i>Respond to a standard of 1 on the rating scale</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tools</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>25</p> <p>Integrated throughout</p>



**MODULE WLD1020: NATURAL HISTORY OF WILDLIFE (continued)**

Concept	Specific Learner Expectations	Notes
Diversity of Wildlife	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>describe the major groups of wildlife present in Alberta and Canada; e.g.: <ul style="list-style-type: none"> <li>micro-organisms</li> <li>invertebrates</li> <li>plants</li> <li>insects</li> <li>fish, amphibians, reptiles</li> <li>birds, mammals</li> </ul> </li> <li>identify and compare species within major groups of wildlife</li> <li>give examples of wildlife species present in rural and urban environments and water and land ecosystems.</li> </ul>	Research representative wildlife groups for major biomes in Alberta and Canada.
Structure, Behaviour and Habitat	<ul style="list-style-type: none"> <li>compare the structure, behaviour and habitat of species that characterize Alberta's wildlife</li> <li>explain interactions of selected wildlife species with other species and the environment; e.g.: <ul style="list-style-type: none"> <li>predator/prey relationships</li> <li>food chains/webs</li> <li>symbiosis/parasitism</li> <li>commensalism/mutualism</li> </ul> </li> <li>illustrate how wildlife species adapt to their environments</li> <li>explain why certain wildlife species may live in some regions of Alberta and Canada, and not in others</li> <li>conduct a research study on one or more wildlife species present in Alberta; e.g.: <ul style="list-style-type: none"> <li>structural and behavioural adaptations</li> <li>interaction with other species</li> <li>habitat</li> <li>life cycle</li> <li>social organization.</li> </ul> </li> </ul>	<p>Focus attention on Alberta's six natural regions. Learn to recognize wildlife signs, tracks, behaviours, scat, etc.</p> <p>Design food webs/ pyramids and energy chains using <i>Natural Regions of Alberta</i> posters.</p> <p>Give examples of wildlife adaptation success.</p> <p>See "Focus on Research."</p> <p>Use magazines/ encyclopedias, resource persons, public libraries, web sites, government brochures, etc.</p> <p>Make plaster casts of animal tracks; collect fur specimens, skulls, bones, nests, etc.</p> <p>Reference activities provided in <i>The Art of Seeing and Tracking</i>.</p>

**MODULE WLD1020: NATURAL HISTORY OF WILDLIFE (continued)**

Concept	Specific Learner Expectations	Notes
Global Context	<p><i>The student should:</i></p> <ul style="list-style-type: none"><li>• compare diversity among living organisms in Alberta and other parts of the world</li><li>• identify reasons for differences in diversity among living organisms in Alberta and other parts of the world; e.g.:<ul style="list-style-type: none"><li>– Earth history</li><li>– evolution</li><li>– extinction</li><li>– number of niches</li><li>– biotic and abiotic factors</li><li>– human influences.</li></ul></li></ul>	<p>Compare the boreal forest in Canada with the boreal forest in Asia.</p> <p>If Alberta data are not available, compare diversity in temperate to tropic regions or temperate to arctic regions.</p>

## **MODULE WLD1030: OUTDOOR EXPERIENCES 1 (SURVIVAL SKILLS)**

**Level:** Introductory

**Theme:** Social and Cultural Perspectives

**Prerequisite:** Emergency First Aid (current certification)

**Module Description:** Students demonstrate the basic skills required for responsible participation in a range of outdoor activities.

**Module Parameters:** Access to an outdoor wilderness environment (e.g., one of Alberta's six natural regions) and gear for outdoor expeditions.

Instructor training (current certification) in Standard Level First Aid is required; instructor training in First Aid in the Wilderness is recommended.

Teachers may find it desirable to access the services of a qualified Outdoor Guide in delivering components of this module.

Off-campus learning activities must be commensurate with previous levels of wilderness training and experience; day trips should precede extended overnight trips; experience in hardcover camping should precede potential softcover camping and/or emergency shelter camping opportunities.

**Note:** Specific learner expectations in Outdoor Experiences 1 and 2 link with the *National Occupational Standards for Outdoor Guide* (Alberta Tourism Education Council), and address core skills in Environmental Awareness, Camp and/or Trip Operation, Safety and Survival.

See Section C (Planning for Instruction) and Section H (Linkages/Transitions) of this Guide for further information on instructor training/certification and linkages.

**Supporting Module:** CTR1210 Personal Safety (Management)

Because of the practical nature of this module, students must have a general knowledge of basic first-aid and survival techniques relevant to wilderness environments. See Planning for Instruction in Section C for further information on student safety.

**Note:** WLD1030 and WLD2030 (Outdoor Experiences 1 and 2) provide opportunities for wilderness interaction at a personal level. This module sequence should place emphasis on developing skills that will enable students to safely observe and appreciate wildlife and habitat within one or more of Alberta's six natural regions.



# MODULE WLD1030: OUTDOOR EXPERIENCES 1 (SURVIVAL SKILLS) (continued)

## Curriculum and Assessment Standards

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>demonstrate knowledge and skills necessary for responsible outdoor experiences</li> <li>conduct safe outdoor activities that have minimal environmental impact</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>a teacher-prepared assessment in which the student demonstrates knowledge of “Safety,” “Survival” and “Environmental Impact” as outlined in the <i>National Occupational Standards for Outdoor Guide</i>. Assessment to address:               <ul style="list-style-type: none"> <li>safety guidelines</li> <li>survival techniques</li> <li>ecotourism and carrying capacity.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Sample Assessment Items: Outdoor Experiences 1, WLD1030-1</i></p> <p><i>Standard</i>  <i>Response indicating 80% mastery</i></p>	20
	<ul style="list-style-type: none"> <li>within a continuous timeframe of 20 or more hours, and through access to an outdoor environment, conducting safe outdoor activities that have minimal impact on the environment. The student will demonstrate appropriate procedures for:               <ul style="list-style-type: none"> <li>travel in outdoor environments</li> <li>observation of flora and fauna</li> <li>minimum impact/no-trace land use</li> <li>setting up emergency shelter</li> <li>signalling for help.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Task Checklist: Outdoor Experiences 1, WLD1030-2</i>  <i>Lab Assessment: Outdoor Experiences, WLDLAB</i></p> <p><i>Standard</i>  <i>Achieve a performance rating of 2 in task assessment <u>and</u> lab assessment</i></p>	80

# MODULE WLD1030: OUTDOOR EXPERIENCES 1 (SURVIVAL SKILLS) (continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>maintaining a log/journal of outdoor experiences that provides summative reflection on: <ul style="list-style-type: none"> <li>individual and group preparedness, cooperation and responsibility</li> <li>observations of wildlife and habitat</li> <li>environmental ethics.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Reflection Guide for Outdoor Experiences, WLDREF-OUT</i></p> <p><i>Standard</i>  <i>Complete five log/journal entries; address criteria for reflection to a standard of 1 on the rating scale</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tools</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
Wilderness Experience	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>identify, assess, avoid and/or respond to physical hazards that may be imposed by the natural environment; e.g.: <ul style="list-style-type: none"> <li>particular terrain and conditions, including avalanche, rock slides, lake and river ice, and bush travel</li> <li>wildlife that may be encountered, including bears, bees, ticks, nonedible plants, snakes</li> <li>changes in weather conditions that may affect personal and group safety</li> </ul> </li> <li>identify, assess, avoid and/or respond to physiological and psychological factors often associated with outdoor experiences; e.g., <ul style="list-style-type: none"> <li>dealing with hypothermia, frostbite, dehydration and heat stroke</li> <li>understanding fatigue and when not to move</li> <li>coping with adversities, such as getting lost or hurt</li> </ul> </li> </ul>	<p><b>Student safety must be a prime consideration in selecting learning activities within this module. Activities must be consistent with student knowledge and skill levels.</b></p> <p>Investigate hazards pertinent to a particular activity. View films and slide shows of outdoor activities that involve physical hazards.</p> <p>Invite guest speakers to present information and advice on expeditions.</p>



**MODULE WLD1030: OUTDOOR EXPERIENCES 1 (SURVIVAL SKILLS) (continued)**

Concept	Specific Learner Expectations	Notes
Wilderness Experience (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>list and explain necessary steps to take in emergency and survival situations in the outdoors; e.g.: <ul style="list-style-type: none"> <li>what to do if lost or separated from the group</li> <li>first aid and emergency response to injury</li> <li>construction of emergency shelters</li> <li>how to gather food from edible plants</li> <li>en route organizational strategies, including lead and sweep, regrouping procedures, pacing</li> </ul> </li> <li>select appropriate personal and group gear for outdoor activities; e.g.: <ul style="list-style-type: none"> <li>personal gear, with consideration to maintaining body temperature and protection from injury</li> <li>group gear, to meet requirements for food, shelter, travel and emergencies</li> </ul> </li> <li>demonstrate safe use and appropriate care of outdoor hand tools, including knives, axes and saws</li> <li>demonstrate safe procedures for building and using outdoor fires; e.g.: <ul style="list-style-type: none"> <li>signalling</li> <li>warming</li> <li>cooking</li> </ul> </li> <li>explain techniques used to plan, pack, carry and prepare foods during outdoor expeditions; e.g.: <ul style="list-style-type: none"> <li>nutritional requirements</li> <li>portability and preservation factors</li> <li>food preparation techniques</li> <li>safe use of campfires</li> </ul> </li> <li>explain techniques that can be used to maintain hygiene during outdoor expeditions; e.g.: <ul style="list-style-type: none"> <li>water purification systems</li> <li>food storage</li> <li>personal health</li> </ul> </li> </ul>	<p>Engage students in simulation activities, role playing and case studies.</p> <p>Review basic first aid and immerse students in emergency response situations.</p> <p>Have students present a "fashion show" or produce a video that demonstrates appropriate equipment and its use.</p> <p>Conduct maintenance clinic.</p> <p>Demonstrate techniques - — then plan and carry out a schoolyard "cookout."</p> <p>Involve students in menu planning for a hypothetical or proposed field trip.</p> <p>Invite guest speakers from a health department or from national/provincial parks.</p>

# **MODULE WLD1030: OUTDOOR EXPERIENCES 1 (SURVIVAL SKILLS) (continued)**

Concept	Specific Learner Expectations	Notes
Wilderness Experience (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>explain techniques for minimum impact/no-trace land use; e.g.: <ul style="list-style-type: none"> <li>guidelines for camping, controlling garbage, using water supply, using open fires and disposing of human waste</li> <li>protection of flora and fauna.</li> </ul> </li> </ul>	<p>Discuss principles of "ecotourism." Consider carrying capacity of a local area in relation to minimum environmental impact.</p> <p>Cite examples of careers in tourism (e.g., outdoor guide, fishing guide) that promote minimum impact land use.</p>
Outdoor Travel	<ul style="list-style-type: none"> <li>plan and conduct safe outdoor expeditions in the natural environment; e.g.: <ul style="list-style-type: none"> <li>research information from a variety of sources, including maps, aerial photographs, guidebooks, journals and local experts</li> <li>interpret route information by selecting reasonable destinations, estimating travel time and anticipating obstacles</li> <li>apply knowledge and skills while en route, including map reading and compass skills, knowledge of terrain and route selection, and mapping of key landmarks and directions</li> </ul> </li> <li>use appropriate modes of travel to safely participate in outdoor activities; e.g.: <ul style="list-style-type: none"> <li>hiking/backpacking</li> <li>cross-country skiing</li> <li>snowshoeing</li> <li>canoeing</li> </ul> </li> <li>demonstrate safe and unobtrusive techniques to examine wildlife and habitat; e.g.: <ul style="list-style-type: none"> <li>plant/animal identification</li> <li>wildlife hazards</li> <li>animal tracks and scat</li> <li>animal behaviour/social patterns</li> </ul> </li> </ul>	<p>Examine maps, research books and reference materials on particular field sites to be visited.</p> <p>Assess alternative routes with regard to time and preparation required for each.</p> <p>Conduct map reading and basic orienteering exercises in school yard.</p> <p>Plan and implement a sequence of skill development activities with a follow-up excursion.</p> <p>Develop appropriate observation techniques; practise observing students in a library, animals in the zoo, etc.</p> <p>Reference the activities and suggestions provided in <i>The Art of Seeing and Tracking</i>.</p> <p>Make plaster casts of animal tracks.</p> <p>Examine furs, skulls, bones, nests, etc.</p>



**MODULE WLD1030: OUTDOOR EXPERIENCES 1 (SURVIVAL SKILLS) (continued)**

Concept	Specific Learner Expectations	Notes
Outdoor Travel (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• demonstrate minimum impact/no-trace land use while participating in outdoor expeditions; e.g.: <ul style="list-style-type: none"> <li>– proper trail use, including the avoidance of trail widening</li> <li>– campsite care, including the use of fires and stoves, tent site selection and firewood selection</li> <li>– waste disposal techniques, including latrines, waste water disposal and garbage.</li> </ul> </li> </ul>	<p>Observe human impacts on a wilderness area.</p> <p>Set up a model campsite in the school yard or a local park; practise minimum impact/no-trace land use.</p>

**MODULE WLD1050: TAKING RESPONSIBILITY (PEOPLE, CULTURE & WILDLIFE)****Level:** Introductory**Theme:** Management and Conservation**Prerequisite:** None**Module Description:** Students explain the significance of wildlife in society, examine relationships among humans and wildlife, and research potential career opportunities in wildlife-related fields.**Module Parameters:** Access to relevant government and community resources.**Curriculum and Assessment Standards**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<i>The student will:</i> <ul style="list-style-type: none"><li>describe the social, economic and environmental significance of wildlife</li></ul>	<i>Assessment of student achievement should be based on:</i> <ul style="list-style-type: none"><li>identifying and explaining six or more scenarios where wildlife:<ul style="list-style-type: none"><li>is important in social and cultural contexts</li><li>has economic value</li><li>is important in environmental contexts.</li></ul></li></ul> <i>Assessment Tool</i> <i>Knowledge/Application Assessment: Significance of Wildlife, WLD1050-1</i> <i>Sample Interview Project: Significance of Wildlife, WLD1050-2</i> <i>Standard</i> <i>Respond to a standard of 1 on the rating scale</i>	40
<ul style="list-style-type: none"><li>explain how personal needs, wants, beliefs and actions may influence wildlife and wildlife habitats</li></ul>	<ul style="list-style-type: none"><li>completing a research project that examines influences of personal needs, wants, beliefs and actions on wildlife and its habitat. Research to address impacts of:<ul style="list-style-type: none"><li>human population growth</li><li>technological and/or economic development</li><li>the extraction and use of natural resources.</li></ul></li></ul> <i>Assessment Tool</i> <i>Research Process: Impacts on Wildlife and Habitat, WLD1050-3</i> <i>Standard</i> <i>Complete all components of research to a standard of 1 on the rating scale</i>	40



**MODULE WLD1050: TAKING RESPONSIBILITY (PEOPLE, CULTURE & WILDLIFE)**  
(continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>identify careers in wildlife-related fields</li> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>maintaining a log/journal of reflections and thoughts regarding the impact of personal attitudes, actions and lifestyle on wildlife and the environment, and ideas for environmental citizenship.</li> </ul> <p><i>Assessment Tool</i> <i>Reflection Guide for Environmental Responsibility/Citizenship, WLDREF-ENV</i></p> <p><i>Standard</i> <i>Complete five journal/log entries; address criteria for reflection to a standard of 1 on the rating scale</i></p> <ul style="list-style-type: none"> <li>given current information on career opportunities in wildlife-related fields, completing a research project on one or more career opportunities in the wildlife sector.</li> </ul> <p><i>Assessment Tool</i> <i>Career Search: Introductory Level, WLDCAR-1</i></p> <p><i>Standard</i> <i>Conduct research to a standard of 1 on the rating scale</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tool</i> <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>20</p> <p>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
Significance of Wildlife	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>explain the social and cultural significance of wildlife; e.g.: <ul style="list-style-type: none"> <li>recreational</li> <li>spiritual and aesthetic</li> <li>medicinal</li> <li>indigenous peoples</li> <li>mythology/astrology</li> <li>literature</li> </ul> </li> </ul>	Subscribe to a magazine for environmental educators (e.g., <i>Borealis</i> , <i>Environmental Views</i> , <i>Update</i> ).

**MODULE WLD1050: TAKING RESPONSIBILITY (PEOPLE, CULTURE & WILDLIFE)**  
(continued)

Concept	Specific Learner Expectations	Notes
Significance of Wildlife (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• explain the economic significance of wildlife; e.g.: <ul style="list-style-type: none"> <li>– tourism</li> <li>– subsistence</li> <li>– commercial trade</li> </ul> </li> <li>• explain the environmental significance of wildlife; e.g.: <ul style="list-style-type: none"> <li>– water, air and soil quality</li> <li>– diversity of life forms</li> <li>– maintenance of ecosystems.</li> </ul> </li> </ul>	<p>Investigate differing views regarding the social, cultural, economic and environmental significance of wildlife based on interviews with community members.</p> <p>Create a pictorial exposé of social and cultural effigy found in periodicals and advertisements.</p>
Personal Impact	<ul style="list-style-type: none"> <li>• explain how individual attitudes, actions and lifestyle may affect wildlife and the environment; e.g.: <ul style="list-style-type: none"> <li>– recreation and tourism</li> <li>– farming practices</li> <li>– housing and transportation choices</li> <li>– subsistence and commercial trade</li> <li>– energy use</li> </ul> </li> <li>• describe how the growth of human populations may affect wildlife through the destruction of habitat; e.g.: <ul style="list-style-type: none"> <li>– deforestation</li> <li>– urban sprawl</li> <li>– construction of roads and buildings</li> <li>– extraction or harvesting of natural resources</li> <li>– pollution.</li> </ul> </li> </ul>	<p>See <i>Project Wild</i> (Section 5: People, Culture and Wildlife).</p> <p>Role playing:</p> <ul style="list-style-type: none"> <li>• “Area of Land for Sale” (Land Conservation Education Program, Factsheet #19).</li> <li>• “To Dam or Not to Dam” (<i>Project Wild</i>, p. 312).</li> </ul>
Career Opportunities	<ul style="list-style-type: none"> <li>• outline career areas and the range of occupational opportunities within wildlife-related fields; e.g.: <ul style="list-style-type: none"> <li>– recreation</li> <li>– tourism</li> <li>– resource harvesting</li> <li>– literature, art and/or film</li> <li>– conservation and management</li> <li>– research</li> <li>– education</li> </ul> </li> </ul>	<p>Gather information from:</p> <ul style="list-style-type: none"> <li>• post-secondary calendars</li> <li>• interviews with people employed in the field</li> <li>• job search manuals</li> <li>• employment offices</li> <li>• newspapers and government publications</li> </ul>



**MODULE WLD1050: TAKING RESPONSIBILITY (PEOPLE, CULTURE & WILDLIFE)**  
(continued)

Concept	Specific Learner Expectations	Notes
Career Opportunities (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• research one or more career opportunities in a wildlife-related field; e.g.: <ul style="list-style-type: none"> <li>– job description/working conditions</li> <li>– entry requirements/competencies</li> <li>– educational/training programs.</li> </ul> </li> </ul>	Contact "Career Hotline" (telephone 1-800-661-3753).

## MODULE WLD1070: HUNTING & GAME MANAGEMENT 1 (ETHICS/GAME IDENTIFICATION)

**Level:** Introductory

**Theme:** Management and Conservation

**Prerequisite:** None

**Module Description:** Students explain the role of regulated hunting in game management, identify Alberta's game animals, and demonstrate knowledge and skills that ensure safe and comfortable experiences in the outdoors.

**Module Parameters:** Access to an outdoor wilderness environment and relevant government agencies.

Teacher must be a registered Alberta Conservation and Hunter Education Program Instructor (Alberta Environmental Protection, Natural Resources Service).

Instruction on basic first-aid and survival techniques to be provided by person(s) having current certification in Standard Level First Aid.

**Note:** Alberta Conservation and Hunter Education Program Student Certificates may be awarded to students who successfully complete Hunting & Game Management 1 and 2, and receive at least 80% on the Alberta Conservation and Hunter Education Examination.

See Section C (Planning for Instruction) and Section H (Linkages/Transitions) of this Guide for further information on instructor training and certification.

**Supporting Module:** CTR1210 Personal Safety (Management) [Career Transitions Strand]

Because of the practical nature of this module, students must have a general knowledge of basic first-aid and survival techniques relevant to wilderness environments. See Planning for Instruction in Section C for further information on student safety.

### Curriculum and Assessment Standards

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<i>The student will:</i> <ul style="list-style-type: none"><li>explain game management practices and the role of regulated hunting in game management</li></ul>	<i>Assessment of student achievement should be based on:</i> <ul style="list-style-type: none"><li>identifying and explaining basic principles of wildlife management and the role of regulated hunting in game management.</li></ul> <i>Assessment Tool</i> <i>Knowledge/Application Assessment: Principles of Wildlife Management, WLD1070-1</i> <i>Standard</i> <i>Respond to a standard of 1 on the rating scale</i>	25



**MODULE WLD1070: HUNTING & GAME MANAGEMENT 1 (ETHICS/GAME IDENTIFICATION)** (continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>identify the distinguishing characteristics of Alberta's ungulates, carnivores, upland birds and waterfowls</li> <li>describe basic equipment and techniques required for safe and comfortable experiences in the outdoors</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>given a current issue regarding hunting ethics: <ul style="list-style-type: none"> <li>negotiating and debating the issue while assuming the role of one or more stakeholder groups</li> <li>preparing and presenting a position paper that outlines an ethical plan of action.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Negotiation and Debate: Introductory Level, WLDNEG-1</i>  <i>Position Paper: Hunting Ethics, WLD1070-2</i></p> <p><i>Standard</i>  <i>Address criteria in negotiation/debate and the position paper to a standard of 1 on the rating scale</i></p> <ul style="list-style-type: none"> <li>given pictures, videos and/or slides of Alberta's ungulates, carnivores, upland birds and waterfowl, identifying selected species by: <ul style="list-style-type: none"> <li>common name</li> <li>distinguishing characteristics/habits</li> <li>habitat/range.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Guide to Wildlife Identification, WLD1070-3</i>  <i>Alberta Conservation and Hunter Education Manual, Natural Resources Service (Alberta Fish and Wildlife)</i></p> <p><i>Standard</i>  <i>Identify eight big game ungulates, five big game carnivores, eight upland game birds and 16 waterfowl</i></p> <ul style="list-style-type: none"> <li>performing practical skills within each of the following areas of outdoor experience: <ul style="list-style-type: none"> <li>basic first aid and survival techniques</li> <li>safe use and care of outdoor equipment.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Task Checklist: First Aid and Outdoor Survival, WLD1070-4</i>  <i>Lab Assessment: Outdoor Experiences, WLDLAB</i></p> <p><i>Standard</i>  <i>Achieve a minimum performance rating of:</i> <ul style="list-style-type: none"> <li>2 in basic first aid/survival</li> <li>1 in the use/care of outdoor equipment</li> <li>1 in lab assessment</li> </ul> </p>	<p>40</p> <p>35</p>

**MODULE WLD1070: HUNTING & GAME MANAGEMENT 1 (ETHICS/GAME IDENTIFICATION)** (continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>a summative theory test for the module in which the student demonstrates knowledge of wildlife management and hunting ethics, the distinguishing characteristics of Alberta's four classes of game species, basic first-aid/survival techniques, and the safe use/care of outdoor equipment.</li> </ul> <p><i>Assessment Tool</i>  <i>Sample Test Items: Alberta Conservation and Hunter Education Program, Natural Resources Service (Alberta Fish and Wildlife)</i></p> <p><i>Standard</i>  <i>Response indicating 80% mastery</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tool</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
<p>Role of Regulated Hunting</p>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>describe the goals of game management and agencies responsible for managing Alberta's game animals</li> <li>identify components and techniques of a game management system; e.g.: <ul style="list-style-type: none"> <li>biological research</li> <li>inventory</li> <li>habitat manipulation</li> <li>managing wildlife populations</li> </ul> </li> <li>explain the role of regulated hunting in game management and conservation</li> </ul>	<p>See <i>Alberta Conservation and Hunter Education Manual</i>.</p> <p>Contact any district Natural Resources Service (Fish and Wildlife) Office for information regarding instructor workshops.</p> <p>Contact the Alberta Hunter Education Film Library.</p> <p>Subscribe to <i>The Alberta Game Warden</i>.</p>



**MODULE WLD1070: HUNTING & GAME MANAGEMENT 1 (ETHICS/GAME IDENTIFICATION) (continued)**

Concept	Specific Learner Expectations	Notes
Role of Regulated Hunting (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>describe responsibilities of the hunter in reporting conditions that may endanger wildlife; e.g.: <ul style="list-style-type: none"> <li>– pollution and its effect on wildlife</li> <li>– habitat loss and abuse</li> <li>– threats to rare and endangered species</li> <li>– neglect for wildlife laws</li> </ul> </li> <li>identify ethical considerations that provide a social standard for conduct when hunting; e.g.: <ul style="list-style-type: none"> <li>– hunter-landowner relations</li> <li>– regard for other land users</li> <li>– respect for self</li> <li>– respect for wildlife</li> <li>– respect for laws and enforcement officers.</li> </ul> </li> </ul>	<p>Philosophical discussion:</p> <ul style="list-style-type: none"> <li>• how much wildlife of any species is enough?</li> <li>• how do we deal with preferred species?</li> <li>• how do we deal with problem species?</li> <li>• what uses of wildlife are appropriate?</li> </ul> <p>Cite examples of relevant careers:</p> <ul style="list-style-type: none"> <li>• research/conservation</li> <li>• law enforcement</li> <li>• tourism and guiding.</li> </ul>
Identification of Game Animals	<ul style="list-style-type: none"> <li>identify and describe the distinguishing characteristics and habits of Alberta's big game ungulates; e.g.: <ul style="list-style-type: none"> <li>– horned animals</li> <li>– antlered animals</li> </ul> </li> <li>identify and describe the distinguishing characteristics and habits of Alberta's big game carnivores; e.g.: <ul style="list-style-type: none"> <li>– cougar, wolf and coyote</li> <li>– grizzly bear and black bear</li> </ul> </li> <li>identify and describe the distinguishing characteristics and habits of Alberta's upland game birds; e.g.: <ul style="list-style-type: none"> <li>– ptarmigan</li> <li>– grouse</li> <li>– pheasant and hungarian partridge</li> </ul> </li> <li>identify and describe the distinguishing characteristics and habits of Alberta's waterfowl; e.g.: <ul style="list-style-type: none"> <li>– puddle and diving ducks</li> <li>– geese</li> </ul> </li> </ul>	<p>Individual/small group research.</p> <p>Displays and presentations.</p> <p>Pictures and slides.</p>

**MODULE WLD1070: HUNTING & GAME MANAGEMENT 1 (ETHICS/GAME IDENTIFICATION) (continued)**

Concept	Specific Learner Expectations	Notes
Identification of Game Animals (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>distinguish between similar game and non-game species of ungulates, carnivores, upland birds and waterfowl; e.g.: <ul style="list-style-type: none"> <li>woodland caribou</li> <li>lynx</li> <li>wild turkey</li> <li>whooping crane and swan.</li> </ul> </li> </ul>	
Equipment, Techniques and Safe Practices	<ul style="list-style-type: none"> <li>describe the characteristics, use and care of basic equipment and personal gear used when hunting in the outdoors; e.g.: <ul style="list-style-type: none"> <li>clothing</li> <li>bedding and tents</li> <li>knives and axes</li> <li>compass and maps</li> <li>backpacks</li> </ul> </li> <li>identify items to be included in first-aid and survival kits</li> <li>identify factors that affect ability to cope with emergency conditions in the outdoors; e.g.: <ul style="list-style-type: none"> <li>pain and cold</li> <li>thirst and hunger</li> <li>fatigue, boredom and loneliness</li> <li>fear</li> </ul> </li> <li>describe procedures for examining someone who is hurt or suddenly becomes ill in the outdoors</li> <li>demonstrate emergency first-aid techniques; e.g.: <ul style="list-style-type: none"> <li>artificial respiration</li> <li>control of bleeding from cuts</li> <li>care for victims of shock or concussion</li> <li>care of sprains, fractures and dislocations</li> <li>treatment of burns, blisters and frostbite</li> <li>care of animal and insect bites</li> </ul> </li> </ul>	<p>Emphasis on field experiences.</p> <p>Potential linkages exist with the "First Aid in the Wilderness" certificate course (see Section H: Linkages/Transitions).</p>



**MODULE WLD1070: HUNTING & GAME MANAGEMENT 1 (ETHICS/GAME IDENTIFICATION) (continued)**

Concept	Specific Learner Expectations	Notes
Equipment, Techniques and Safe Practices (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• demonstrate techniques for detecting, treating and preventing hypothermia</li> <li>• demonstrate basic survival techniques for the outdoors; e.g.: <ul style="list-style-type: none"> <li>– fire building</li> <li>– shelter building</li> <li>– sending rescue signals</li> <li>– securing water and food.</li> </ul> </li> </ul>	

## MODULE WLD1080: ANGLING & FISH MANAGEMENT

**Level:** Introductory

**Theme:** Management and Conservation

**Prerequisite:** None

**Module Description:** Students explain the role of recreational fishing in the management and conservation of fish resources, and demonstrate knowledge of the responsible practices required for fishing or related outdoor activities.

**Module Parameters:** Access to an outdoor aquatic environment and relevant government agencies.

Teacher must be a registered Alberta Fishing Education Program Instructor (Alberta Environmental Protection, Natural Resources Service).

Instruction on basic first-aid and survival techniques to be provided by person(s) having current certification in Standard Level First Aid.

**Note:** Alberta Fishing Education Program Student Certificates may be awarded to students who successfully complete this module and receive at least 80% on the Alberta Fishing Education Examination.

See Section C (Planning for Instruction) and Section H (Linkages/ Transitions) of this Guide for further information on instructor training and certification.

**Supporting Module:** CTR1210 Personal Safety (Management) [Career Transitions Strand]

Because of the practical nature of this module, students must have a general knowledge of basic first-aid and survival techniques relevant to aquatic environments. See Planning for Instruction in Section C for further information on student safety.

### Curriculum and Assessment Standards

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<i>The student will:</i> <ul style="list-style-type: none"><li>explain the role of recreational fishing in the management of fish resources, and social and legal standards of conduct for game fishing</li></ul>	<i>Assessment of student achievement should be based on:</i> <ul style="list-style-type: none"><li>identifying and explaining:<ul style="list-style-type: none"><li>principles of fisheries management and the role of recreational fishing in managing fish resources</li><li>ethical and legal responsibilities of individuals involved in game fishing.</li></ul></li></ul> <i>Assessment Tool</i> <i>Knowledge/Application Assessment: Principles of Fisheries Management, WLD1080-1</i> <i>Standard</i> <i>Respond to a standard of 1 on the rating scale</i>	30

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# MODULE WLD1080: ANGLING & FISH MANAGEMENT (continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>identify and describe the distinguishing characteristics and habitats of Alberta's game fish</li> <li>describe basic fishing equipment and safe practices for fishing</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>given a current issue regarding fishing ethics: <ul style="list-style-type: none"> <li>negotiating and debating the issue while assuming the role of one or more stakeholder groups</li> <li>preparing and presenting a position paper that outlines an ethical plan of action.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Negotiation and Debate: Introductory Level, WLDNEG-1</i>  <i>Position Paper: Fishing Ethics, WLD1080-2</i></p> <p><i>Standard</i>  <i>Address criteria in negotiation/debate and the position paper to a standard of 1 on the rating scale</i></p> <ul style="list-style-type: none"> <li>given pictures, videos and/or slides of major game fish species in Alberta, identifying selected species by: <ul style="list-style-type: none"> <li>common name</li> <li>physical characteristics</li> <li>habitat and range</li> <li>spawning and feeding habits.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Guide to Fish Identification, WLD1080-3</i>  <i>Alberta Fishing Education Manual, Natural Resources Service (Alberta Fish and Wildlife)</i></p> <p><i>Standard</i>  <i>Identify 10 species of salmonids, three species of percids and four other species of game fish</i></p> <ul style="list-style-type: none"> <li>demonstrating practical techniques for the safe handling and use of fishing equipment.</li> </ul> <p><i>Assessment Tool</i>  <i>Task Checklist: Fishing Equipment and Techniques, WLD1080-4</i>  <i>Lab Assessment: Outdoor Experiences, WLDLAB</i></p> <p><i>Standard</i>  <i>Achieve a performance rating of 2 in each area on the task checklist and a performance rating of 1 in lab assessment</i></p>	<p>40</p> <p>30</p>



## MODULE WLD1080: ANGLING & FISH MANAGEMENT (continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>a summative theory test for the module in which the student demonstrates knowledge of fisheries management, game fish identification, fishing equipment/techniques, fish handling/cooking and safety considerations.</li> </ul> <p><i>Assessment Tool</i>  <i>Sample Test Items: Alberta Fishing Education Program, Natural Resources Service (Alberta Fish and Wildlife)</i></p> <p><i>Standard</i>  <i>Response indicating 80% mastery</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tools</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
<p>Role of Recreational Fishing</p>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>describe the goals of fisheries management and agencies responsible for managing Alberta's fish populations</li> <li>distinguish among recreational, commercial and game fishing</li> <li>describe components and techniques of a fisheries management program; e.g.: <ul style="list-style-type: none"> <li>fishing regulations</li> <li>fish stocking and monitoring</li> <li>aquatic habitat development and improvement</li> <li>law enforcement</li> <li>public information programs</li> </ul> </li> </ul>	<p>See <i>Alberta Fishing Education Program Manual</i>.</p> <p>Contact any district Natural Resources Service (Fish and Wildlife) Office for information regarding instructor workshops.</p> <p>Subscribe to <i>The Alberta Game Warden</i>.</p> <p>Contact Alberta Environmental Protection for student copies of <i>Alberta Guide to Sportfishing</i>.</p>

# **MODULE WLD1080: ANGLING & FISH MANAGEMENT (continued)**

Concept	Specific Learner Expectations	Notes
Role of Recreational Fishing (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• explain the role of recreational fishing in the management and conservation of fish resources</li> <li>• identify ethical considerations that provide a social standard of conduct for game fishing; e.g.: <ul style="list-style-type: none"> <li>– fisherman–landholder relations</li> <li>– regard for other people</li> <li>– respect for self</li> <li>– respect for wildlife</li> <li>– catch-and-release fishing</li> <li>– respect for laws</li> </ul> </li> <li>• describe fishing regulations and associated legislation that provide a legal standard of conduct for game fishing; e.g.: <ul style="list-style-type: none"> <li>– laws to protect and conserve fish</li> <li>– laws to govern conduct of fishermen</li> <li>– small vessel legislation</li> <li>– Criminal Code</li> <li>– <i>Litter Act</i>.</li> </ul> </li> </ul>	<p>Investigate monitoring techniques:</p> <ul style="list-style-type: none"> <li>• electrofishing</li> <li>• sampling, tagging and netting.</li> </ul> <p>Panel discussions and student debates.</p> <p>Investigate local fishing seasons and quotas.</p> <p>Discuss catch-and-release fishing as a philosophy as well as a technique. Why are some persons more inclined to keep fish from stocked lakes than when caught in the wild?</p> <p>Invite a resource person from a legal profession to explain the legal process and law enforcement.</p> <p>Cite examples of relevant career opportunities:</p> <ul style="list-style-type: none"> <li>• research/conservation</li> <li>• law enforcement</li> <li>• tourism/guiding.</li> </ul>
Fish Identification	<ul style="list-style-type: none"> <li>• describe common ways of classifying fish; e.g.: <ul style="list-style-type: none"> <li>– by species relationship: <ul style="list-style-type: none"> <li>• salmonids</li> <li>• percids</li> <li>• minnows</li> </ul> </li> <li>– by water temperature preference: <ul style="list-style-type: none"> <li>• cold water</li> <li>• warm water</li> </ul> </li> <li>– by feeding habits: <ul style="list-style-type: none"> <li>• fish eaters</li> <li>• insect eaters</li> <li>• plant eaters</li> </ul> </li> </ul> </li> </ul>	<p>Individual/small group research.</p> <p>Another way of classifying fish may be by habitat; e.g.:</p> <ul style="list-style-type: none"> <li>• lake dwellers</li> <li>• river dwellers.</li> </ul>

# **MODULE WLD1080: ANGLING & FISH MANAGEMENT (continued)**

Concept	Specific Learner Expectations	Notes
Fish Identification (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>relate the relative abundance of fish species to their position in a food chain</li> <li>describe water characteristics that influence the distribution and abundance of fish; e.g.: <ul style="list-style-type: none"> <li>temperature</li> <li>dissolved oxygen</li> <li>water depth</li> <li>alkalinity (acidity)</li> </ul> </li> <li>identify and describe the distinguishing characteristics of major game fish species in Alberta; e.g.: <ul style="list-style-type: none"> <li>physical features</li> <li>habitat</li> <li>spawning habits</li> <li>feeding habits</li> <li>angling techniques.</li> </ul> </li> </ul>	<p>Draw food chains.</p> <p>Displays and presentations.</p>
Equipment and Safe Practices	<ul style="list-style-type: none"> <li>describe the characteristics, use and care of common fishing equipment; e.g.: <ul style="list-style-type: none"> <li>fishing rods and reels</li> <li>lines and knots</li> <li>hooks and artificial lures</li> <li>swivels and wire leaders</li> <li>sinkers, down riggers and floats</li> <li>netting</li> </ul> </li> <li>describe the nature and purpose of different angling techniques</li> <li>demonstrate techniques for the care of table fish and trophy fish</li> <li>demonstrate techniques for handling and cooking table fish</li> </ul>	<p>Emphasis on field experiences.</p> <p>Spin and bait casting, trolling, fly fishing, ice fishing, bow fishing.</p> <p>Cleaning, dressing, scaling, filleting, skinning, freezing and cooking.</p>



## MODULE WLD1080: ANGLING & FISH MANAGEMENT (continued)

Concept	Specific Learner Expectations	Notes
Equipment and Safe Practices (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"><li>• explain safe practices for fishing and engaging in related outdoor activities; e.g.:<ul style="list-style-type: none"><li>– boat safety</li><li>– ice safety</li><li>– hook removal</li><li>– bear safety</li></ul></li><li>• describe emergency first-aid and survival techniques, and items to be included in first-aid and survival kits.</li></ul>	Potential linkages exist with the “First Aid in the Wilderness” certificate course (see Section H: Linkages/Transitions).

## MODULE CURRICULUM AND ASSESSMENT STANDARDS:

### SECTION E: INTERMEDIATE LEVEL

The following pages define the curriculum and assessment standards for the intermediate level of Wildlife.

Intermediate level modules help students build on the competencies developed at the introductory level and focus on developing more complex competencies. They provide a broader perspective, helping students recognize the wide range of related career opportunities available within the strand.

Module WLD2020: Measuring the Value (Diversity of Wildlife Values).....	E.3
Module WLD2030: Outdoor Experiences 2 (Wilderness Excursion).....	E.7
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**MODULE WLD2020: MEASURING THE VALUE (DIVERSITY OF WILDLIFE VALUES)****Level:** Intermediate**Theme:** Social and Cultural Perspectives**Prerequisite:** None**Module Description:** Students assess the significance of wildlife in society, analyze relationships between humans and wildlife, and research career opportunities in wildlife-related fields.**Module Parameters:** Access to relevant government and community resources.**Curriculum and Assessment Standards**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>compare and contrast the social, environmental and economic significance of wildlife</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>comparing and contrasting the social, environmental and economic significance of wildlife within two cultures (e.g., First Nation, European, Asian).</li> </ul> <p><i>Assessment Tool</i>  <i>Knowledge/Application Assessment: Significance of Wildlife, WLD2020-1</i></p> <p><i>Standard</i>  <i>Respond to a standard of 2 on the rating scale</i></p> <ul style="list-style-type: none"> <li>developing a plan for an ecotour (e.g., bird watching, whale watching, river rafting, horseback riding). Plan to address:               <ul style="list-style-type: none"> <li>reasons for taking the tour</li> <li>tour agenda/itinerary</li> <li>tour details</li> <li>guidelines for minimum environmental impact.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Criteria for Planning an Ecotour, WLD2020-2</i></p> <p><i>Standard</i>  <i>Complete the plan to a standard of 2 on the rating scale</i></p>	40
<ul style="list-style-type: none"> <li>describe the impact of personal needs, wants, beliefs and actions on wildlife and wildlife habitats</li> </ul>	<ul style="list-style-type: none"> <li>maintaining a log/journal of reflections and thoughts regarding the impact of personal attitudes, actions and lifestyle on wildlife and the environment, and ideas for environmental citizenship.</li> </ul> <p><i>Assessment Tool</i>  <i>Reflection Guide for Environmental Responsibility/Citizenship, WLDREF-ENV</i></p> <p><i>Standard</i>  <i>Complete five journal/log entries; address criteria for reflection to a standard of 2 on the rating scale</i></p>	40

Intermediate

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**MODULE WLD2020: MEASURING THE VALUE (DIVERSITY OF WILDLIFE VALUES)**  
(continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>describe career opportunities and trends in wildlife-related fields</li> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>a proposal (oral, written or visual) that suggests one personal action and one leadership role in relation to wildlife conservation and environmental citizenship.</li> </ul> <p><i>Assessment Tool</i>  <i>Assessment Criteria: Proposal for Environmental Action, WLDPRO</i>  <i>Sample Proposals: Wildlife Enhancement, WLDSAM</i></p> <p><i>Standard</i>  <i>Complete each proposal to a standard of 2 on the rating scale</i></p> <ul style="list-style-type: none"> <li>a letter written to a government official or environmental organization expressing support or concern regarding the impact of personal/societal actions on wildlife and habitat.</li> </ul> <p><i>Assessment Tool</i>  <i>Assessment Criteria: Letters of Support or Concern, WLDLET</i></p> <p><i>Standard</i>  <i>Complete the letter to a standard of 2 on the rating scale; critique of response is optional</i></p> <ul style="list-style-type: none"> <li>given current information on career opportunities in wildlife-related fields (e.g., recreation, tourism, resource consumption, literature/art/drama, conservation and management, research, education), completing a research project on one or more careers in the wildlife sector.</li> </ul> <p><i>Assessment Tool</i>  <i>Career Search: Intermediate Level, WLDCAR-2</i></p> <p><i>Standard</i>  <i>Conduct research to a standard of 2 on the rating scale</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tools</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>20</p> <p>Integrated throughout</p>

**MODULE WLD2020: MEASURING THE VALUE (DIVERSITY OF WILDLIFE VALUES)**  
(continued)

Concept	Specific Learner Expectations	Notes
Significance of Wildlife	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>explain how human and wildlife relationships are expressed through religious teachings, art, music, drama, literature, photography or other means of expression</li> <li>describe present and future social and health benefits that may be derived from wildlife; e.g.: <ul style="list-style-type: none"> <li>recreational</li> <li>medicinal</li> <li>spiritual and aesthetic</li> </ul> </li> <li>explain how wildlife may be used as a barometer of overall environmental quality; e.g.: <ul style="list-style-type: none"> <li>water, air and soil quality</li> <li>diversity of life forms</li> </ul> </li> <li>infer relationships among the distribution and abundance of wildlife and the economy of a given area; e.g.: <ul style="list-style-type: none"> <li>tourism</li> <li>commercial trade</li> <li>industrial products.</li> </ul> </li> </ul>	<p>See <i>Project Wild</i> (Section 2: Diversity of wildlife values).</p> <p>Interview a religious leader about the significance of wildlife in his or her belief system.</p> <p>Visit an art gallery and survey expressions of wildlife through art forms.</p> <p>Gather and display advertisements for ecotours.</p> <p>Interview a local RCMP or conservation officer about the confiscation of wildlife parts.</p> <p>Prepare a tally sheet of pros and cons regarding several uses of wildlife.</p>
Personal Impact	<ul style="list-style-type: none"> <li>describe the impact of individual attitudes, actions and lifestyle on wildlife and the environment; e.g., <ul style="list-style-type: none"> <li>pursuit of leisure time and outdoor activities</li> <li>patterns and levels of resource consumption</li> <li>subsistence and commercial trade</li> <li>consumptive/conservation ethic</li> </ul> </li> <li>describe the impact of human population growth on wildlife and its habitat; e.g.: <ul style="list-style-type: none"> <li>rural and urban development</li> <li>pollution</li> <li>patterns and levels of resource consumption</li> <li>recreation and tourism</li> </ul> </li> <li>propose responsible and ethical lifestyle actions in relation to wildlife and the environment; e.g.: <ul style="list-style-type: none"> <li>personal actions</li> <li>leadership roles.</li> </ul> </li> </ul>	<p>Conduct debates on current wildlife issues.</p> <p>Consider:</p> <ul style="list-style-type: none"> <li>use of water and energy</li> <li>housing and transportation choices.</li> </ul> <p>Consider:</p> <ul style="list-style-type: none"> <li>transportation corridors</li> <li>extraction/harvest of natural resources</li> <li>addition of materials to the environment.</li> </ul> <p>Write letters of praise/concern to government agencies and environmental organizations.</p> <p>Design a poster that illustrates responsible actions in relation to wildlife and environment.</p>

**MODULE WLD2020: MEASURING THE VALUE (DIVERSITY OF WILDLIFE VALUES)**  
(continued)

Concept	Specific Learner Expectations	Notes
Career Opportunities	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• identify employment opportunities related to wildlife in both public and private sectors at local, national and international levels</li> <li>• outline career areas and the range of occupational opportunities within wildlife-related fields; e.g.: <ul style="list-style-type: none"> <li>– recreation</li> <li>– tourism</li> <li>– resource harvesting</li> <li>– literature, art and/or film</li> <li>– conservation and management</li> <li>– research</li> <li>– education</li> </ul> </li> <li>• gather employment statistics within one or more career areas; e.g.: <ul style="list-style-type: none"> <li>– types of careers</li> <li>– number of workers</li> <li>– employment trends</li> </ul> </li> <li>• infer career opportunities and trends from employment statistics</li> <li>• research one or more career opportunities in a wildlife-related field; e.g.: <ul style="list-style-type: none"> <li>– job description/working conditions</li> <li>– entry requirements/competencies</li> <li>– educational/training opportunities</li> <li>– wage and security of employment relative to other fields</li> <li>– opportunity for advancement</li> <li>– opportunity for self-employment and entrepreneurship.</li> </ul> </li> </ul>	<p>Gather information through:</p> <ul style="list-style-type: none"> <li>• post-secondary calendars</li> <li>• interviews with people employed in the field</li> <li>• job search manuals</li> <li>• employment offices</li> <li>• newspapers and government publications.</li> </ul> <p>Obtain National Occupational Profiles (NOC).</p> <p>Contact the “Career Hotline” (telephone 1-800-661-3753).</p>



## MODULE WLD2030: OUTDOOR EXPERIENCES 2 (WILDERNESS EXCURSION)

<b>Level:</b>	Intermediate
<b>Theme:</b>	Social and Cultural Perspectives
<b>Prerequisites:</b>	WLD1030 Outdoor Experiences 1 (Survival Skills) Emergency First Aid (current certification)
<b>Module Description:</b>	Students plan, prepare for and conduct an extended outdoor wilderness trip.

**Module Parameters:** Access to an outdoor wilderness environment and gear for outdoor expeditions. Instructor training (current certification) in Standard Level First Aid is required; instructor training in First Aid in the Wilderness is recommended.

Teachers may find it desirable to access the services of a qualified Outdoor Guide in delivering components of this module.

Off-campus learning activities must be commensurate with previous levels of wilderness training and experience; day trips should precede extended overnight trips; experience in hardcover camping should precede potential softcover camping and/or emergency shelter camping opportunities.

**Note:** Specific learner expectations in Outdoor Experiences 1 and 2 link with the *National Occupational Standards for Outdoor Guide* (Alberta Tourism Education Council), and address core skills in Environmental Awareness, Camp and/or Trip Operation, Safety and Survival.

See Section C (Planning for Instruction) and Section H (Linkages/Transitions) of this Guide for further information on instructor training/certification and linkages.

**Supporting Module:** CTR1210 Personal Safety (Management) [Career Transitions Strand]

Because of the practical nature of this module, students must have a general knowledge of basic first-aid and survival techniques relevant to wilderness environments. See Planning for Instruction in Section C for further information on student safety.

**Note:** WLD1030 and WLD2030 (Outdoor Experiences 1 and 2) provide opportunities for wilderness interaction at a personal level. This module sequence should place emphasis on developing skills that will enable students to safely observe and appreciate wildlife and habitat within one or more of Alberta's six natural regions.

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# MODULE WLD2030: OUTDOOR EXPERIENCES 2 (WILDERNESS EXCURSION) (continued)

## Curriculum and Assessment Standards

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>present a plan for an extended outdoor wilderness trip</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>developing and presenting collaborative group plans for an extended outdoor wilderness trip as outlined in the <i>National Occupational Standards for Outdoor Guide</i> (see <u>Camp and/or Trip Operation: Prepare for Trips</u>). Group plans to address: <ul style="list-style-type: none"> <li>pre-trip planning and logistics</li> <li>equipment and supply requirements</li> <li>organization of personal gear.</li> </ul> </li> </ul> <p><i>Assessment Tools</i> National Occupational Standards for Outdoor Guide <i>Task Checklist: Outdoor Experiences 2, WLD2030-1</i></p> <p><i>Standard</i> <i>Complete each component of trip planning to a standard of 2 on the rating scale</i></p>	20
<ul style="list-style-type: none"> <li>conduct and conclude, safely, an extended outdoor wilderness trip with minimal environmental impact</li> </ul>	<ul style="list-style-type: none"> <li>within a continuous timeframe of at least 72 hours, and through access to an outdoor environment, conduct and conclude the trip as outlined in the <i>National Occupational Standards for Outdoor Guide</i> (see <u>Camp and/or Trip Operation: Conduct Trips, Legal Issues: Comply With Legislation and Environmental Awareness: Minimize Impact</u>). The student will demonstrate procedures for: <ul style="list-style-type: none"> <li>setting up camp</li> <li>preparing meals</li> <li>ensuring safety and survival of self and others</li> <li>complying with pertinent legislation</li> <li>breaking camp</li> <li>ensuring least possible environmental impact.</li> </ul> </li> </ul> <p><i>Assessment Tools</i> National Occupational Standards for Outdoor Guide <i>Task Checklist: Outdoor Experiences 2, WLD2030-1</i></p> <p><i>Standard</i> <i>Conduct and conclude the trip to a standard of 2 on the rating scale</i></p>	80

# **MODULE WLD2030: OUTDOOR EXPERIENCES 2 (WILDERNESS EXCURSION) (continued)**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>successfully participating in activities while en route that involve personal interaction with the wilderness environment.</li> </ul> <p><i>Assessment Tool</i>  <i>Task Checklist: Outdoor Experiences 2, WLD2030–1</i></p> <p><i>Standard</i>  <i>Complete four of the activities (as outlined in the task checklist) that involve personal interaction with the wilderness environment to a standard of 2 on the rating scale</i></p> <ul style="list-style-type: none"> <li>a post-trip assessment that provides observations and personal impressions, and summarizes: <ul style="list-style-type: none"> <li>activities well done</li> <li>problems encountered and suggested solutions</li> <li>recommendations regarding future trips.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Post-Trip Assessment for Outdoor Experiences 2, WLD2030–2</i></p> <p><i>Standard</i>  <i>Achieve a performance rating of 2 in applicable areas of post-trip assessment</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction throughout the learning process.</li> </ul> <p><i>Assessment Tool</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>



**MODULE WLD2030: OUTDOOR EXPERIENCES 2 (WILDERNESS EXCURSION) (continued)**

Concept	Specific Learner Expectations	Notes
Trip Planning and Preparation	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>establish specific objectives for an outdoor wilderness trip; e.g.: <ul style="list-style-type: none"> <li>goals and expectations</li> <li>length of trip</li> <li>destination</li> <li>general schedule and agenda</li> </ul> </li> <li>incorporate guidelines for environmental awareness into trip planning and preparation; e.g.: <ul style="list-style-type: none"> <li>principles of ecotourism</li> <li>consideration for carrying capacity of the area</li> <li>strategies for minimum impact land use</li> </ul> </li> <li>identify and obtain appropriate supplies, equipment and personal gear for the trip; e.g.: <ul style="list-style-type: none"> <li>water and food</li> <li>tents, stoves, axe</li> <li>first-aid and survival kits</li> <li>clothing and foot wear</li> <li>toiletries</li> </ul> </li> <li>devise plan for weather and seasonal conditions; e.g.: <ul style="list-style-type: none"> <li>identify hazards particular to the area</li> <li>listen to weather and news reports and forecasts</li> </ul> </li> <li>conduct a pre-trip assessment of supplies, equipment and personal gear; e.g.: <ul style="list-style-type: none"> <li>compare to trip checklist</li> <li>assess quality, quantity and condition</li> <li>assess relative to weather and seasonal conditions</li> <li>obtain missing and/or specialty items</li> </ul> </li> </ul>	<p>Hold a pre-trip meeting with students and their parents/guardians prior to the excursion to confirm trip details. Obtain information regarding special needs (e.g., physical limitations, special dietary requirements). Discuss trip expectations.</p> <p>Obtain <i>Travel Alberta's Adventure Guide</i> (published annually) for a list of outfitters/guides available throughout the province.</p> <p>List potential environmental impacts that may result from the trip. Write before and after journal entries to document impact on a campsite.</p> <p>List all supplies and equipment to be taken on the trip. Identify items that may have significant environmental impact—note considerations for use or alternatives that would lessen impact.</p> <p>Establish methods of regular and emergency communication, and a contingency plan to be used if regular communication is interrupted.</p> <p>Compare supplies to checklist. Ensure all equipment is in satisfactory working condition. Pack supplies/equipment in waterproof containers.</p>

**MODULE WLD2030: OUTDOOR EXPERIENCES 2 (WILDERNESS EXCURSION) (continued)**

Concept	Specific Learner Expectations	Notes
Trip Planning and Preparation (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• prepare supplies, equipment and personal gear for transportation</li> <li>• devise plan for courses of action to cope with potential emergency situations in the wilderness; e.g.: <ul style="list-style-type: none"> <li>– extreme weather conditions</li> <li>– fire or flood</li> <li>– injury and illness.</li> </ul> </li> </ul>	<p>Potential linkages exist with the “First Aid in the Wilderness” certificate course (see Section H: Transitions/Linkages).</p> <p>Outline requirements for survival and first-aid kits.</p>
Conducting and Concluding the Trip	<ul style="list-style-type: none"> <li>• follow guidelines for safe outdoor travel; e.g.: <ul style="list-style-type: none"> <li>– inform responsible person of travel plans</li> <li>– follow travel schedule as planned</li> <li>– use orientation and navigational skills</li> <li>– identify potential hazards and take necessary precautions</li> <li>– dress according to mode of travel, weather and season</li> <li>– watch for changes in weather conditions</li> </ul> </li> <li>• set up a wilderness camp site, following guidelines for comfort, safety and least possible environmental impact; e.g.: <ul style="list-style-type: none"> <li>– select camp site considering: <ul style="list-style-type: none"> <li>• site exposure and drainage</li> <li>• access to water and firewood</li> <li>• impact on flora and fauna</li> <li>• proximity to potential dangers</li> </ul> </li> <li>– erect tent or lean-to</li> <li>– assemble other amenities</li> <li>– protect food from wildlife and spoilage</li> <li>– protect equipment from the elements</li> </ul> </li> <li>• follow minimal impact guidelines in establishing: <ul style="list-style-type: none"> <li>– latrine location and toilet procedures</li> <li>– wash area and procedures</li> <li>– fire site and use</li> <li>– methods of garbage and waste water disposal</li> </ul> </li> <li>• comply with local, provincial and federal legislation relevant to activities that are undertaken</li> </ul>	<p>Be aware of hazards particular to the area. Listen to weather and news reports. Carry survival equipment.</p> <p>Reroute, postpone or cancel trip if conditions threaten safety.</p> <p>Select dry, level ground. Consider potential hazards, including fire, rock slides, avalanches, dead materials close to shelter.</p> <p>Dig deep hole for toilet pit. Provide soil and environmentally friendly substance to decrease odour and speed decomposition. Use biodegradable soap.</p> <p>Consider land use, permits, seasonal restrictions, quotas, etc. Seek clarification if necessary. Report violations.</p>

**MODULE WLD2030: OUTDOOR EXPERIENCES 2 (WILDERNESS EXCURSION) (continued)**

Concept	Specific Learner Expectations	Notes
Conducting and Concluding the Trip (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>assume outdoor camp duties on a rotational basis; e.g.: <ul style="list-style-type: none"> <li>meal preparation</li> <li>camp maintenance and hygiene</li> </ul> </li> <li>demonstrate practical knowledge and skills in at least three areas relevant to wilderness interaction; e.g.: <ul style="list-style-type: none"> <li>plant or animal identification</li> <li>animal track and scat identification</li> <li>use of equipment</li> <li>survival skills</li> </ul> </li> <li>monitor the activities of wildlife in the area and take precautions to avoid dangerous situations; e.g.: <ul style="list-style-type: none"> <li>observe animal behaviours</li> <li>observe social patterns/relationships</li> <li>identify wildlife hazards</li> </ul> </li> <li>describe evidence of human impact on flora, fauna and/or natural habitat</li> <li>follow appropriate procedures to break camp; e.g.: <ul style="list-style-type: none"> <li>pack supplies, equipment and personal gear</li> <li>take down shelter</li> <li>clean site</li> </ul> </li> <li>conclude the wilderness trip and conduct a post-trip assessment; e.g.: <ul style="list-style-type: none"> <li>observations and personal impressions</li> <li>problems encountered</li> <li>recommendations regarding future trips.</li> </ul> </li> </ul>	<p>Have students participate in all areas of preparation, operation and clean-up. Alternate chores during trip.</p> <p>Reference the activities and suggestions provided in <i>The Art of Seeing and Tracking</i>.</p> <p>Make plaster casts of animal tracks; examine fur, skulls, bones, nests, etc.</p> <p>Dispose of garbage properly. Store food safely. Maintain safe distance from wildlife.</p> <p>Do circle tour of camp—look for garbage and misplaced equipment.</p> <p>Develop a slide/tape presentation based on the outdoor trip. Consider:</p> <ul style="list-style-type: none"> <li>satisfaction with equipment and supplies</li> <li>suitability of environment or route</li> <li>inconsistencies between trip and expectations.</li> </ul>



**MODULE WLD2040: WILDLIFE SPACES & SPECIES****Level:** Intermediate**Theme:** Technology and Applications**Prerequisite:** None**Module Description:** Students present the results of research on wildlife spaces and species in Alberta and other parts of the world, and compare different strategies used in wildlife management.**Module Parameters:** Access to relevant government and community resources.**Curriculum and Assessment Standards**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>identify and compare representative ecoregions in Alberta and Canada with similar ecoregions in other parts of the world</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>completing a research project on representative wildlife spaces and species in Canada and other parts of the world. Research to involve identification of: <ul style="list-style-type: none"> <li>seven major ecoregions of Canada</li> <li>five World Heritage sites.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Research Process: Representative Wildlife Spaces and Species, WLD2040-1</i></p> <p><i>Standard</i>  <i>Complete all components of the research project to a standard of 2</i></p> <ul style="list-style-type: none"> <li>a teacher-prepared assessment in which the student demonstrates general knowledge of Canada's spaces and species.</li> </ul> <p><i>Assessment Tool</i>  <i>Sample Assessment Items: Canada's Spaces and Species, WLD2040-2</i></p> <p><i>Standard</i>  <i>Response indicating 80% mastery</i></p>	30
<ul style="list-style-type: none"> <li>identify and describe threatened or endangered wildlife spaces and species in Alberta and Canada</li> </ul>	<ul style="list-style-type: none"> <li>identifying and explaining: <ul style="list-style-type: none"> <li>the roles of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and the Canadian Register of Heritage Properties (CRHP)</li> <li>the five categories of species at risk in Canada</li> <li>methods used to identify spaces at risk in Canada.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Knowledge/Application Assessment: Endangered Spaces and Species, WLD2040-3</i></p> <p><i>Standard</i>  <i>Respond to a standard of 2 on the rating scale</i></p>	40

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# **MODULE WLD2040: WILDLIFE SPACES & SPECIES (continued)**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>describe and compare local and global strategies for wildlife protection and habitat management</li> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>a presentation or report on a threatened or endangered space or species in Alberta or Canada. Presentation/report to address: <ul style="list-style-type: none"> <li>identification of the space or species through oral/written description <u>and</u> an illustration/map</li> <li>the range of the species or area of the space as indicated on a map</li> <li>past and present population numbers and/or changes in boundaries</li> <li>factors contributing to the present status of the space or species</li> <li>actions being taken to preserve the space or species.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Presentations/Reports: Intermediate Level, WLDPRE-2</i></p> <p><i>Standard</i>  <i>Achieve a minimum rating of 2 on the rating scale for Presentations/Reports</i></p> <ul style="list-style-type: none"> <li>identifying and comparing roles, responsibilities and strategies relevant to two local, two national and two international programs currently implemented to manage and protect spaces and species.</li> </ul> <p><i>Assessment Tool</i>  <i>Knowledge/Application Assessment: Wildlife Management Programs, WLD2040-4</i></p> <p><i>Standard</i>  <i>Respond to a standard of 2 on the rating scale</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tool</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>30</p> <p>Integrated throughout</p>

# MODULE WLD2040: WILDLIFE SPACES & SPECIES (continued)

Concept	Specific Learner Expectations	Notes
Representative Spaces and Species	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• identify representative ecoregions in Alberta and Canada, and indicator species found in these regions</li> <li>• illustrate the interdependence of wildlife species within selected ecoregions of Alberta and Canada; e.g.: <ul style="list-style-type: none"> <li>– food webs</li> <li>– energy chains</li> </ul> </li> <li>• identify regulating factors for wildlife species within selected ecoregions of Alberta and Canada; e.g.: <ul style="list-style-type: none"> <li>– food and water</li> <li>– habitat</li> <li>– predators</li> <li>– carrying capacity</li> <li>– species competition</li> <li>– disease/parasites</li> <li>– other environmental factors</li> </ul> </li> <li>• compare representative ecoregions in Alberta and Canada with similar ecoregions in other parts of the world; e.g.: <ul style="list-style-type: none"> <li>– climate</li> <li>– geography</li> <li>– indicator species.</li> </ul> </li> </ul>	<p>Suggested teacher resource for back-ground information: <i>The Nature of Canada: A Primer on Spaces and Species</i> (Environment Canada).</p> <p>Obtain <i>Natural Regions of Alberta</i> map (Alberta Environmental Protection).</p> <p>Outline major ecoregions of Canada on a map.</p> <p>Design a food web for a first-level carnivore found in Alberta.</p> <p>Compare and contrast wildlife in similar ecoregions around the world.</p>
Endangered Spaces and Species	<ul style="list-style-type: none"> <li>• research policy and factors used to determine if a species or population is endangered</li> <li>• define and give examples of endangered spaces and species</li> <li>• explain how societal actions may cause wildlife spaces and species to become threatened or endangered; e.g.: <ul style="list-style-type: none"> <li>– human population growth</li> <li>– habitat loss: deforestation and agriculture</li> <li>– unsustainable use of renewable resources</li> <li>– wasteful consumption</li> <li>– pollution</li> </ul> </li> </ul>	<p>Discuss factors used to determine the status (population health) of wildlife.</p> <p>Consider direct and indirect causes of extinction:</p> <ul style="list-style-type: none"> <li>• overfishing</li> <li>• habitat loss.</li> </ul> <p>Investigate:</p> <ul style="list-style-type: none"> <li>• The Endangered Spaces Campaign</li> <li>• The Canadian Wilderness Charter</li> <li>• Canadian Council on Ecological Areas</li> <li>• Special Places 2000.</li> </ul>



# **MODULE WLD2040: WILDLIFE SPACES & SPECIES (continued)**

Concept	Specific Learner Expectations	Notes
Endangered Spaces and Species (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>present the results of research on an endangered wildlife space or species in Alberta or Canada.</li> </ul>	See "Focus on Research."
Canada in a Global Context	<ul style="list-style-type: none"> <li>explain the role of protected spaces in managing ecosystems at local, national and global levels; e.g.: <ul style="list-style-type: none"> <li>parks</li> <li>wildlife and wilderness areas</li> <li>migratory bird sanctuaries</li> <li>ecological reserves</li> <li>world heritage sites</li> <li>private landowners</li> <li>grazing reserves</li> </ul> </li> <li>explain the role of public and private organizations in Canada and other nations with regard to managing and protecting wildlife; e.g.: <ul style="list-style-type: none"> <li>government</li> <li>industry</li> <li>environmental and other organizations</li> </ul> </li> <li>compare policies/philosophies regarding the sustainable management of wildlife and habitat in Canada with those of other nations and governments</li> <li>summarize the viewpoints of indigenous peoples in Canada and other nations regarding the management of wildlife spaces and species; e.g.: <ul style="list-style-type: none"> <li>traditional wilderness use</li> <li>current use and future directions.</li> </ul> </li> </ul>	<p>Discuss the roles of provincial and federal governments in establishing policy for wildlife protection and management.</p> <p>Locate World Heritage sites in Canada and other parts of the world.</p> <p>Interview two or more persons working in support of a protected space. Summarize viewpoints regarding the value of protected spaces in managing wildlife and habitat.</p>

**MODULE WLD2060: INTERACTIONS (WILDLIFE & SOCIETY)****Level:** Intermediate**Theme:** Management and Conservation**Prerequisite:** None**Module Description:** Students explain how human populations interact with wildlife, and describe management strategies that enable wildlife and society to coexist.**Module Parameters:** Access to relevant government and community resources.**Curriculum and Assessment Standards**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>describe the effects of human population growth on wildlife</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>identifying and explaining three or more situations where changes in human populations have resulted in subsequent changes in wildlife (e.g., number, behaviour, habitat).</li> </ul> <p><i>Assessment Tool</i>  <i>Knowledge/Application Assessment: Human Interaction with Wildlife, WLD2060-1</i></p> <p><i>Standard</i>  <i>Respond to a standard of 2 on the rating scale</i></p> <ul style="list-style-type: none"> <li>given a map of Canada, identifying six spaces and/or species that have become threatened or endangered because of human population growth.</li> </ul> <p><i>Assessment Tool</i>  <i>Task Checklist for Mapping, WLDMAP</i></p> <p><i>Standard</i>  <i>Complete applicable mapping tasks to a standard of 2 on the rating scale</i></p>	10
<ul style="list-style-type: none"> <li>describe the effects of land use practices on wildlife</li> </ul>	<ul style="list-style-type: none"> <li>describing different land use practices, and the consequences of each for wildlife. Land use practices to be representative of those used in: <ul style="list-style-type: none"> <li>agriculture</li> <li>energy and mining</li> <li>forestry</li> <li>tourism/outdoor recreation</li> <li>urban planning.</li> </ul> </li> </ul> <p><i>Standard</i>  <i>Identify 10 different land use practices, and the costs and/or benefits of each to wildlife</i></p>	45

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Intermediate

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**MODULE WLD2060: INTERACTIONS (WILDLIFE & SOCIETY) (continued)**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>explain management strategies that enable wildlife and society to coexist</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>completing a research project on one technology or land use practice, and its impacts on wildlife and habitat. Research to address: <ul style="list-style-type: none"> <li>nature of the technology or land use practice</li> <li>the wildlife spaces/species affected</li> <li>benefits and costs for wildlife and society.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Research Process: Impacts of Technology/Land Use, WLD2060-2</i></p> <p><i>Standard</i>  <i>Complete all components of research to a standard of 2 on the rating scale</i></p> <ul style="list-style-type: none"> <li>given a current issue regarding land use and its consequences for wildlife, negotiating and debating the issue while assuming the role of one or more stakeholder groups.</li> </ul> <p><i>Assessment Tool</i>  <i>Negotiation and Debate: Intermediate Level, WLDNEG-2</i></p> <p><i>Standard</i>  <i>Address criteria in negotiation/debate to a standard of 2 on the rating scale</i></p> <ul style="list-style-type: none"> <li>a presentation or report on an organization working to manage interactions between wildlife and society. Presentation/report to address: <ul style="list-style-type: none"> <li>goals/objectives of the organization</li> <li>major stakeholder groups represented</li> <li>management approaches/techniques</li> <li>accomplishments of the organization to date</li> <li>benefits and costs for wildlife and society.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Presentations/Reports: Intermediate Level, WLDPRE-2</i></p> <p><i>Standard</i>  <i>Complete presentation/report to a standard of 2 on the rating scale</i></p>	<p>45</p>



## MODULE WLD2060: INTERACTIONS (WILDLIFE & SOCIETY) (continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>a comparison of two existing wildlife management plans with respect to: <ul style="list-style-type: none"> <li>goals</li> <li>approaches taken</li> <li>outcomes and accomplishments.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Knowledge/Application Assessment: Comparing Wildlife Management Plans, WLD2060-3</i></p> <p><i>Standard</i>  <i>Respond to a standard of 2 on the rating scale</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tools</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
Human Populations	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>describe how wildlife affects the development, movement and size of human societies</li> <li>explain the effects of human populations and developing technologies on wildlife and habitat</li> <li>give examples of the effects of human populations on wildlife and habitat in the local area; e.g.: <ul style="list-style-type: none"> <li>changes in habitat</li> <li>distribution, diversity and abundance of species</li> </ul> </li> <li>identify Canadian wildlife spaces and species that have become threatened, endangered and/or extinct as a result of the impact of human populations.</li> </ul>	<p>Make reference to:</p> <ul style="list-style-type: none"> <li>developing nations</li> <li>historical development</li> <li>aboriginal groups.</li> </ul> <p>Explore global issues:</p> <ul style="list-style-type: none"> <li>tropical rainforest.</li> </ul> <p>Graph local and global population growth over the past 10 years.</p> <p>Video/print studies.</p>

**MODULE WLD2060: INTERACTIONS (WILDLIFE & SOCIETY) (continued)**

Concept	Specific Learner Expectations	Notes
Land Use Practices	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• identify human and societal interactions with wildlife; e.g.: <ul style="list-style-type: none"> <li>– agriculture</li> <li>– energy and mining</li> <li>– forestry</li> <li>– tourism and outdoor recreation</li> <li>– urban planning</li> </ul> </li> <li>• identify the positive and negative aspects of human and societal interactions; e.g.: <ul style="list-style-type: none"> <li>– food production/habitat loss</li> <li>– employment gains/species extinction</li> </ul> </li> <li>• explain positive and negative effects of land use practices on wildlife; e.g.: <ul style="list-style-type: none"> <li>– deforestation</li> <li>– habitat protection and improvement</li> <li>– agriculture: habitat loss and degradation, zero tillage, shelterbelts, pest management</li> <li>– diversification of land use by farmers: special crops, game ranching</li> <li>– range expansion of some species</li> <li>– habitat fragmentation</li> <li>– management of wildlife populations</li> <li>– urban expansion.</li> </ul> </li> </ul>	<p>Student-directed research projects concerning specific land use practices and wildlife.</p> <p>Discussion/debate on land use issues.</p> <p>See “Wetland Environments” print materials and videos (Ducks Unlimited).</p>

**MODULE WLD2060: INTERACTIONS (WILDLIFE & SOCIETY) (continued)**

Concept	Specific Learner Expectations	Notes
Managing Interactions	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>describe the goals and objectives of different stakeholder groups in managing interactions between wildlife and society; e.g.: <ul style="list-style-type: none"> <li>government and nongovernment organizations</li> <li>business and industry</li> <li>landowners</li> <li>individual citizens</li> </ul> </li> <li>research possible approaches and techniques to manage interactions between wildlife and society; e.g.: <ul style="list-style-type: none"> <li>legal approaches</li> <li>incentive programs</li> <li>education programs</li> <li>demonstration programs</li> <li>land use planning</li> <li>establishment of policies</li> </ul> </li> <li>describe the consequences of an existing management plan for wildlife; e.g.: <ul style="list-style-type: none"> <li>environmental</li> <li>social, cultural and economic.</li> </ul> </li> </ul>	<p>Use role playing, debate and panel discussion to examine views of different stakeholder groups.</p> <p>This module provides a good introduction to WLD209: Issues in Wildlife 1.</p> <p>Legal approaches: environmental impact assessments/reviews.</p> <p>Incentive Programs: Prairie Farm Rehabilitation Administration (PFRA), Wildlife Habitat Canada.</p> <p>Education programs: District Agriculturists/ Wildlife Biologists, Wetland Conservation Corporation, Alberta North American Waterfowl Management Plan Center (NAWMP), Ducks Unlimited.</p> <p>Demonstration programs: Agriculture Canada demonstrating grazing practices.</p> <p>Establishment of policies: Wildlife Policy for Canada, The Green Plan, Alberta and Canada Wetland Policies.</p> <p>Refer to:</p> <ul style="list-style-type: none"> <li>North American Waterfowl Management Plan</li> <li>Peregrine Falcon Recovery Plan</li> <li>Swift Fox Rehabilitation Project.</li> </ul>



**MODULE WLD2070: HUNTING & GAME MANAGEMENT 2  
(FIELD TECHNIQUES/REGULATIONS)**

**Level:** Intermediate

**Theme:** Management and Conservation

**Prerequisite:** WLD1070 Hunting & Game Management 1 (Ethics/Game Identification)

**Module Description:** Students demonstrate knowledge of the basic parts and safe handling of bows, arrows and firearms, and explain the legal responsibilities of the sports person.

**Module Parameters:** Access to an outdoor wilderness environment and relevant government agencies.

Teacher must be a registered Alberta Conservation and Hunter Education Program Instructor (Alberta Environmental Protection, Natural Resources Service).

Instruction on firearm handling and safety to be provided by person(s) having successfully completed the Canadian Firearms Safety Course (Alberta Justice, Provincial Firearms Program).

Because of the sensitive nature of topics included in this module, a school board motion and parental consent is required prior to module delivery.

**Note:** Alberta Conservation and Hunter Education Program Student Certificates may be awarded to students who successfully complete Hunting & Game Management 1 and 2, and receive at least 80% on the Alberta Conservation and Hunter Education Examination.

See Section C (Planning for Instruction) and Section H (Linkages/Transitions) of this Guide for further information on instructor training and certification.

**Supporting Module:** CTR1210 Personal Safety (Management) [Career Transitions Strand]

Because of the practical nature of this module, students must have a general knowledge of basic first-aid and survival techniques relevant to wilderness environments. See Planning for Instruction in Section C for further information on student safety.

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**MODULE WLD2070: HUNTING & GAME MANAGEMENT 2 (FIELD TECHNIQUES/REGULATIONS) (continued)**

**Curriculum and Assessment Standards**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>demonstrate knowledge of the basic parts and safe handling of bows, arrows and firearms</li> <li>describe techniques for targeting, handling and dressing game animals in the field</li> <li>explain personal and legal responsibilities of the sports person</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>under the supervision of a qualified instructor, demonstrating practical knowledge of: <ul style="list-style-type: none"> <li>the basic parts of bows, arrows and firearms</li> <li>safe handling techniques for bows, arrows and firearms.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Task Checklist: Bows, Arrows and Firearms, WLD2070-1</i>  <i>Lab Assessment: Outdoor Experiences, WLDLAB</i></p> <p><i>Standard</i>  <i>Achieve a performance rating of 3 in <u>all areas</u> on the task checklist and <u>applicable areas</u> of lab assessment</i></p>	50
	<ul style="list-style-type: none"> <li>under the supervision of a qualified instructor, demonstrating (or explaining) practical field techniques for: <ul style="list-style-type: none"> <li>maintaining visual acuity and physical fitness</li> <li>safe and accurate targeting</li> <li>handling and dressing game animals.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Task Checklist: Field Techniques, WLD2070-2</i>  <i>Lab Assessment: Outdoor Experiences, WLDLAB</i></p> <p><i>Standard</i> <ul style="list-style-type: none"> <li>Achieve a performance rating of: <ul style="list-style-type: none"> <li>2 in visual acuity/physical fitness</li> <li>3 in targeting</li> <li>2 in handling/dressing game animals</li> <li>3 in applicable areas of lab assessment</li> </ul> </li> </ul> </p>	20
	<ul style="list-style-type: none"> <li>completing a research project on laws and regulations that: <ul style="list-style-type: none"> <li>protect life and property</li> <li>protect and conserve wildlife</li> <li>govern behaviour of the sports person.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Research Process: Personal and Legal Responsibilities, WLD2070-3</i></p> <p><i>Standard</i>  <i>Complete all components of research to a standard of 2 on the rating scale</i></p>	30

**MODULE WLD2070: HUNTING & GAME MANAGEMENT 2 (FIELD TECHNIQUES/REGULATIONS) (continued)**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>demonstrate basic competencies</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>a summative theory test for the module in which the student demonstrates knowledge of the basic parts and safe handling techniques for bows, arrows and firearms, and personal and legal responsibilities of the sports person.</li> </ul> <p><i>Assessment Tool</i>  <i>Sample Test Items: Alberta Conservation and Hunter Education Program, Natural Resources Service (Alberta Fish and Wildlife)</i></p> <p><i>Standard</i>  <i>Response indicating 80% mastery</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tools</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
Bows, Arrows and Firearms	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>describe the design and construction of bows, arrows and accessories</li> <li>demonstrate safe practices for bow handling and use</li> <li>demonstrate appropriate techniques for the care and maintenance of archery equipment</li> <li>demonstrate the fundamental techniques of bow shooting</li> </ul>	<p><b>Student safety must be a prime consideration in selecting learning activities within this module.</b></p> <p>See <i>Alberta Conservation and Hunter Education Manual</i>.</p> <p>Contact any district Natural Resources Service (Fish and Wildlife) Office regarding instructor training workshops.</p>



**MODULE WLD2070: HUNTING & GAME MANAGEMENT 2 (FIELD TECHNIQUES/REGULATIONS) (continued)**

Concept	Specific Learner Expectations	Notes
Bows, Arrows and Firearms (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• explain the design, structure and operation of firearms; e.g.: <ul style="list-style-type: none"> <li>– basic parts and their operation</li> <li>– types of action</li> <li>– function of sights</li> </ul> </li> <li>• describe the basic components of rifle and shotgun ammunition</li> <li>• explain appropriate techniques for the care and maintenance of firearms</li> <li>• explain the basic practices of safe rifle and shotgun handling</li> <li>• explain techniques for safe loading and sighting-in a firearm</li> <li>• explain appropriate range procedure for recreational shooting activities</li> <li>• explain safe handling practices for firearms and ammunition in the range, classroom and field.</li> </ul>	<p>Stance, grip, aim, release, follow-through.</p> <p>Contact Alberta Hunter Education Film Library.</p> <p><b>Appropriate instructor training and certification is essential.</b></p> <p>Obtain <i>Firearms in Canada: A Simple Guide for Canadian Gun Owners</i> (current edition) for information on relevant firearms legislation in Canada.</p> <p>Stance, mount, aim, trigger control, breath control, follow-through.</p> <p>Plinking, novelty shooting, regulation shooting.</p>
Field Techniques	<ul style="list-style-type: none"> <li>• describe visual abilities that are important to the sportsperson; e.g.: <ul style="list-style-type: none"> <li>– distance and nearpoint vision</li> <li>– depth perception</li> <li>– peripheral vision</li> <li>– colour vision</li> </ul> </li> <li>• identify factors that may affect visual perception and strategies for improving vision in outdoor environments</li> <li>• explain the role of physical conditioning in safe and comfortable outdoor experiences</li> </ul>	<p>Subscribe to <i>The Alberta Game Warden</i>.</p> <p>Individual/small group research.</p> <p>See <i>Alberta Conservation and Hunter Education Manual</i> (Vision and Physical Fitness).</p> <p>Conduct stretching and endurance activities. Have students assess their own capacity for sustained activity</p>

**MODULE WLD2070: HUNTING & GAME MANAGEMENT 2 (FIELD TECHNIQUES/REGULATIONS) (continued)**

Concept	Specific Learner Expectations	Notes
Field Techniques (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• identify vital target areas on game animals; e.g.: <ul style="list-style-type: none"> <li>– big game</li> <li>– bird game</li> </ul> </li> <li>• explain techniques for handling trophy and non-trophy animals in the field; e.g.: <ul style="list-style-type: none"> <li>– dressing, skinning and plucking</li> <li>– hanging and cooling</li> <li>– preserving hide</li> <li>– transporting.</li> </ul> </li> </ul>	<p>Consider the use of:</p> <ul style="list-style-type: none"> <li>• videos</li> <li>• 3-D targets.</li> </ul> <p>Emphasis on field experiences.</p> <p>See <i>Alberta Conservation and Hunter Education Manual</i>. Loan the video on <i>Field Dressing</i> from your local Natural Resources Service (Fish and Wildlife) Office.</p>
Personal and Legal Responsibilities	<ul style="list-style-type: none"> <li>• explain the legal process, and government agencies in place, to create, change and enforce laws that influence practices of the sports person</li> <li>• identify federal, provincial and municipal laws and regulations that are relevant to a sports person in Alberta; e.g.: <ul style="list-style-type: none"> <li>– laws that protect life and property</li> <li>– laws that protect and conserve wildlife</li> <li>– laws that govern behaviour of the sports person</li> </ul> </li> <li>• interpret specific laws and/or regulations regarding trespassing, access to public and private land, use of firearms and bow hunting</li> <li>• explain responsibilities and procedures to report violations of the law and biological data to appropriate officials.</li> </ul>	<p>Invite resource person from a legal profession.</p> <p>Panel discussions and student debates.</p> <p>Oral presentations.</p> <p>Current sources of information include:</p> <ul style="list-style-type: none"> <li>• <i>Alberta Wildlife Act</i></li> <li>• <i>Alberta Game Warden</i></li> <li>• <i>Alberta Hunting Regulations</i>.</li> </ul> <p>Encourage students to consider the views of divergent interest groups. Conduct a “mock” tribunal or court case (e.g., a coyote and/or individual on trial).</p>

**MODULE WLD2090: ISSUES IN WILDLIFE 1 (RESEARCH & ANALYSIS)****Level:** Intermediate**Theme:** Management and Conservation**Prerequisite:** None**Module Description:** Students examine a range of Canadian and global wildlife issues, and present the results of research on one or more issues concerning wildlife in Canada.**Module Parameters:** Access to relevant government and community resources.**Curriculum and Assessment Standards**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>identify a range of Canadian and global wildlife issues</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>summarizing a range of current wildlife issues significant in Alberta, Canada and the global context. Each summary to address: <ul style="list-style-type: none"> <li>a description of the issue and related positions/stakeholders</li> <li>factors responsible for creating the issue</li> <li>major consequences to humans and wildlife</li> <li>actions being taken to resolve the issue.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Criteria for Summarizing Wildlife Issues, WLD2090-1</i>  <i>Sample Wildlife Issues, WLD2090-2</i></p> <p><i>Standard</i>  <i>Summarize five issues to a standard of 2 on the rating scale</i></p>	40
<ul style="list-style-type: none"> <li>describe alternatives and consequences associated with one or more issues concerning wildlife in Canada</li> </ul>	<ul style="list-style-type: none"> <li>completing a research project on one local or national wildlife issue. Research to address: <ul style="list-style-type: none"> <li>an explanation of the issue and stakeholders involved</li> <li>a survey of different viewpoints regarding the issue</li> <li>a statement of personal position regarding the issue and rationale for the position taken</li> <li>reference to a related wildlife issue in another part of the world.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Research Process: Issues in Wildlife, WLD2090-3</i></p> <p><i>Standard</i>  <i>Complete research to a standard of 2 on the rating scale</i></p>	60

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**MODULE WLD2090: ISSUES IN WILDLIFE 1 (RESEARCH & ANALYSIS) (continued)**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tools</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
Issues in Wildlife	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>identify a range of wildlife issues within each of the following categories: <ul style="list-style-type: none"> <li>loss and degradation of habitat</li> <li>subsistence and commercial trade</li> <li>preservation versus conservation</li> </ul> </li> <li>infer the impact of each of the issues on wildlife, humans and the environment</li> <li>explain different philosophies, ethics and alternatives regarding each of the issues.</li> </ul>	<p>Subscribe to <i>Update</i> (a magazine for environmental educators published by FEESA).</p> <p>Conduct a review of magazine articles that focus on local or Canadian wildlife issues (e.g., <i>Equinox</i>, <i>The Alberta Game Warden</i>).</p>
Wildlife Research	<ul style="list-style-type: none"> <li>research a significant wildlife issue in Canada; e.g.: <ul style="list-style-type: none"> <li>identify key elements and stakeholders</li> <li>distinguish among facts, opinions and beliefs</li> <li>consider implications and consequences</li> </ul> </li> <li>describe different alternatives with respect to the issue, and potential strategies for resolving the issue</li> <li>explain and defend a position with respect to the issue based on the evidence gathered</li> <li>compare the wildlife issue with similar issues in other parts of the world</li> <li>compare the goals and achievements of one or more wildlife conservation groups with respect to the issue.</li> </ul>	<p>See research strategies outlined in "Focus on Research."</p> <p>Create a scrapbook containing articles on local and international wildlife issues.</p>

# MODULE CURRICULUM AND ASSESSMENT STANDARDS:

## SECTION F: ADVANCED LEVEL

The following pages define the curriculum and assessment standards for the advanced level of Wildlife.

Advanced level modules demand a higher level of expertise and help prepare students for entry into the workplace or a related post-secondary program.

Module WLD3020: Making a Difference (Protection & Stewardship).....	F.3
Module WLD3040: Wildlife Research .....	F.9
Module WLD3050: Wildlife Management 1 (Basic Principles) .....	F.13
Module WLD3060: Wildlife Management 2 (Applications).....	F.17
Module WLD3090: Issues in Wildlife 2 (Negotiation & Debate).....	F.21

**MODULE WLD3020: MAKING A DIFFERENCE (PROTECTION & STEWARDSHIP)****Level:** Advanced**Theme:** Social and Cultural Perspectives**Prerequisite:** None

**Module Description:** Students explain how human populations and wildlife affect each other, describe management strategies that enable humans and wildlife to coexist, and demonstrate individual and shared actions that foster environmental stewardship.

**Module Parameters:** Access to relevant government and community resources.

**Curriculum and Assessment Standards**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"><li>describe ways in which human populations and wildlife affect each other</li></ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"><li>a visual/multimedia presentation (e.g., poster, scrapbook, videotape, computer design) that profiles interrelationships among wildlife and cultures/societies. Presentation to include one or more examples of the influences of wildlife in each of the following areas:<ul style="list-style-type: none"><li>food, clothing and shelter</li><li>spiritual and aesthetic</li><li>medicinal</li><li>recreation.</li></ul></li></ul> <p><i>Assessment Tool</i> <i>Presentations/Reports: Advanced Level, WLDPRE-3</i></p> <p><i>Standard</i> <i>Present and explain 10 scenarios where wildlife has influenced societies/cultures; complete the presentation to a standard of 3 on the rating scale</i></p> <ul style="list-style-type: none"><li>identifying and explaining one or more human-wildlife relationships expressed through each of the following: art, literature, dance, music and drama.</li></ul> <p><i>Assessment Tool</i> <i>Knowledge/Application Assessment: Wildlife and the Arts, WLD3020-1</i></p> <p><i>Standard</i> <i>Respond to a standard of 3 on the rating scale</i></p>	20



**MODULE WLD3020: MAKING A DIFFERENCE (PROTECTION & STEWARDSHIP)**  
(continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>describe and compare strategies used to manage wildlife spaces and species</li> <li>demonstrate commitment to environmental responsibility, through individual and shared actions</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>a written composition (e.g., story, poem) inspired by a painting, photograph or sculpture of a wildlife space or species.</li> </ul> <p><i>Assessment Tool</i> <i>Criteria for Evaluating Written Compositions, WLD3020-2</i></p> <p><i>Standard</i> <i>Complete to a standard of 3 on the rating scale</i></p> <ul style="list-style-type: none"> <li>completing a research project on a wildlife management program working to enhance a wildlife space and/or species.</li> </ul> <p><i>Assessment Tool</i> <i>Research Process: Wildlife Management Programs, WLD3020-3</i></p> <p><i>Standard</i> <i>Complete research to a standard of 3 on the rating scale</i></p> <ul style="list-style-type: none"> <li>negotiating and debating an issue regarding the impact of lifestyle on wildlife and the environment.</li> </ul> <p><i>Assessment Tool</i> <i>Negotiation and Debate: Advanced Level, WLDNEG-3</i></p> <p><i>Standard</i> <i>Address criteria in negotiation/debate to a standard of 3 on the rating scale</i></p> <ul style="list-style-type: none"> <li>a proposal and rationale (oral, written or visual) for: <ul style="list-style-type: none"> <li>a personal action that will affect wildlife in positive ways</li> <li>a leadership role/community program that will enhance a wildlife space and/or species.</li> </ul> </li> </ul> <p><i>Assessment Tool</i> <i>Assessment Criteria: Proposal for Environmental Action, WLDPRO</i> <i>Sample Proposals: Wildlife Enhancement, WLDSAM</i></p> <p><i>Standard</i> <i>Complete each proposal to a standard of 3 on the rating scale</i></p>	<p>30</p> <p>50</p>

**MODULE WLD3020: MAKING A DIFFERENCE (PROTECTION & STEWARDSHIP)**  
(continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>volunteering five hours of time working in the community to enhance a wildlife space and/or species.</li> </ul> <p><i>Assessment Tool</i> <i>Log/Verification of Volunteer Work, WLDLOG-VOL</i></p> <p><i>Standard</i> <i>Complete all sections of the log/verification for five hours of volunteer work</i></p> <ul style="list-style-type: none"> <li>a letter written to a government official or environmental organization expressing support or concern regarding the impact of personal/societal actions on wildlife and habitat, and critique of the response received.</li> </ul> <p><i>Assessment Tool</i> <i>Assessment Criteria: Letters of Support or Concern, WLDLET</i></p> <p><i>Standard</i> <i>Complete the letter to a standard of 3 on the rating scale</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tools</i> <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
Our Relationship with Wildlife	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>explain past and present influences of wildlife on cultures and societies; e.g.: <ul style="list-style-type: none"> <li>food, clothing and shelter</li> <li>spiritual and aesthetic benefits</li> <li>medicinal values</li> <li>recreation and companionship</li> </ul> </li> </ul>	<p>Examine differing cultural views regarding wildlife:</p> <ul style="list-style-type: none"> <li>consumption</li> <li>aesthetics.</li> </ul>

**MODULE WLD3020: MAKING A DIFFERENCE (PROTECTION & STEWARDSHIP)**  
(continued)

Concept	Specific Learner Expectations	Notes
Our Relationship with Wildlife (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• identify wildlife relationships expressed through art, literature, dance, music and drama</li> <li>• explain how social attitudes and values regarding wildlife have changed</li> <li>• identify positive and negative impacts of human populations on wildlife.</li> </ul>	<p>Visit cultural/ natural museums; e.g.:</p> <ul style="list-style-type: none"> <li>• Provincial Museum</li> <li>• Glenbow Museum.</li> </ul> <p>Visit historic sites/ national and provincial parks.</p>
Management Strategies	<ul style="list-style-type: none"> <li>• explain how decisions involving Canada's wildlife are a shared responsibility of government agencies and landowners, and are influenced by transboundary concerns</li> <li>• research decision-making processes that affect wildlife and the environment; e.g.: <ul style="list-style-type: none"> <li>– political</li> <li>– economic</li> <li>– social</li> <li>– scientific</li> </ul> </li> <li>• describe two or more wildlife management strategies, and related trade-offs or compromises</li> <li>• compare the contributions of different stakeholder groups that conduct management activities; e.g.: <ul style="list-style-type: none"> <li>– government and nongovernment organizations</li> <li>– business and industry</li> <li>– landowners</li> <li>– individual citizens</li> </ul> </li> <li>• assess the impact of individual attitudes, actions and lifestyle on wildlife and habitat; e.g.: <ul style="list-style-type: none"> <li>– conservation ethic</li> <li>– consumer practices</li> <li>– recreational choices.</li> </ul> </li> </ul>	<p>Research international agreements on cooperative wildlife protection plans.</p> <p>Investigate:</p> <ul style="list-style-type: none"> <li>• <i>Migratory Bird Act</i></li> <li>• <i>Wildlife Act</i></li> <li>• North American Waterfowl Management Plan</li> <li>• Ramsar Convention</li> <li>• CITIES</li> <li>• COSEWIC</li> <li>• World Conservation Strategy.</li> </ul>
Environmental Stewardship	<ul style="list-style-type: none"> <li>• identify an individual action plan for managing wildlife that permits the achievement of social, cultural, economic and environmental goals; e.g.: <ul style="list-style-type: none"> <li>– individual and shared actions</li> <li>– leadership roles</li> </ul> </li> </ul>	<p>See <i>Project Wild</i> (Section 7: Responsible Human Actions).</p>



**MODULE WLD3020: MAKING A DIFFERENCE (PROTECTION & STEWARDSHIP)**  
(continued)

Concept	Specific Learner Expectations	Notes
Environmental Stewardship (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• plan, conduct and assess a school-wide campaign to increase awareness of relationships between lifestyle, wildlife and the environment; e.g.: <ul style="list-style-type: none"> <li>– establish goals</li> <li>– plan and conduct</li> <li>– assess results</li> </ul> </li> <li>• research and describe an issue regarding the impact of lifestyle on wildlife; e.g.: <ul style="list-style-type: none"> <li>– conduct research</li> <li>– develop a position</li> <li>– participate in debate</li> </ul> </li> <li>• identify ways in which individuals can influence public decisions that affect wildlife and the environment; e.g.: <ul style="list-style-type: none"> <li>– voting</li> <li>– lobbying</li> <li>– seeking office</li> <li>– supporting compatible interest groups.</li> </ul> </li> </ul>	<p>Plan and implement as a group project.</p> <p>See <i>The Nature of Canada: A Primer on Spaces and Species</i> (Chapter 8: Seven Steps to Making a Difference, p. 155).</p>

## MODULE WLD3040: WILDLIFE RESEARCH

**Level:** Advanced

**Theme:** Technology and Applications

**Prerequisite:** None

**Module Description:** Students explain applications of the wildlife research process, and conduct experimental research on a wildlife space or species.

**Module Parameters:** Sample research articles, a science laboratory and/or outdoor wilderness environment.

**Note:** This module is a prerequisite for WLD3050: Wildlife Management 1 and WLD3060: Wildlife Management 2. It is recommended that students focus attention on a common theme (i.e., a space or species of particular relevance) throughout WLD3040, WLD3050 and WLD3060.

### Curriculum and Assessment Standards

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"><li>identify components of the wildlife research process and their application to a sample wildlife space or species</li></ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"><li>given information regarding scientific research conducted on a wildlife space or species, identifying major components of the research process as they apply to the space or species.</li></ul> <p><i>Assessment Tool</i> <i>Assessment Criteria: Components of Scientific Research, WLD3040-1</i></p> <p><i>Standard</i> <i>Identify components and applications of scientific research within the context of one space or species to a standard of 3 on the rating scale</i></p> <ul style="list-style-type: none"><li>defining concise research problems for each of five wildlife topics suited to scientific research.</li></ul> <p><i>Assessment Tool</i> <i>Assessment Criteria: Defining Research Problems, WLD3040-2</i></p> <p><i>Standard</i> <i>Define five research problems to a standard of 3 on the rating scale</i></p>	30

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# **MODULE WLD3040: WILDLIFE RESEARCH (continued)**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>plan and conduct experimental research on a wildlife space or species</li> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>planning and conducting scientific research on one wildlife space or species. Research to include: <ul style="list-style-type: none"> <li>a definition of a problem</li> <li>a review of existing information</li> <li>a proposal for data collection</li> <li>data collection and presentation</li> <li>data analysis and assessment</li> <li>conclusions</li> <li>recommendations.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Scientific Research: Spaces and Species, WLD3040–3</i></p> <p><i>Standard</i>  <i>Complete research to a standard of 3 on the rating scale</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tools</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>70</p> <p>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
Research Process	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>identify and describe major stages and steps in the research process; e.g.: <ul style="list-style-type: none"> <li>defining a research problem</li> <li>conducting a literature review</li> <li>organizing information</li> <li>proposing a plan for data collection</li> <li>collecting data</li> <li>analyzing/assessing data</li> <li>drawing conclusions and making recommendations based on data</li> <li>communicating results</li> </ul> </li> </ul>	<p>See "Focus on Research."</p> <p>Review articles on research provided in scientific journals; e.g.:</p> <ul style="list-style-type: none"> <li><i>Canadian Field Naturalist</i></li> <li><i>Journal of Wildlife Management</i></li> <li><i>Arctic.</i></li> </ul> <p>Consider the use of community support networks; e.g.:</p> <ul style="list-style-type: none"> <li>Natural Resources Service (Fish and Wildlife)</li> <li>Agriculture Research Stations</li> <li>Environment Canada.</li> </ul>



# **MODULE WLD3040: WILDLIFE RESEARCH (continued)**

Concept	Specific Learner Expectations	Notes
Research Process (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>explain applications of the research process in finding answers to questions about wildlife spaces or species</li> <li>relate the research process to an existing piece of wildlife research.</li> </ul>	Refer to Canadian Wildlife Services project reports.
Research Project	<ul style="list-style-type: none"> <li>identify a problem or question regarding a wildlife space or species; e.g.: <ul style="list-style-type: none"> <li>growth rate of a plant</li> <li>bird preference to seed type</li> <li>effect of light on plant growth</li> <li>habitat preference of a mammal</li> <li>overwintering of species</li> <li>reproductive rate of composting worms</li> </ul> </li> <li>outline sources for background information about the problem or question; e.g.: <ul style="list-style-type: none"> <li>library</li> <li>computer</li> <li>interview</li> </ul> </li> <li>propose a plan for conducting research related to the problem or question; e.g.: <ul style="list-style-type: none"> <li>experimental design</li> <li>logistics</li> <li>funding and partnerships</li> </ul> </li> <li>describe baseline and specific data using a variety of information gathering techniques; e.g.: <ul style="list-style-type: none"> <li>sampling and surveys</li> <li>observation</li> <li>measurement and estimation</li> <li>experimentation</li> </ul> </li> <li>analyze and interpret data that is gathered, and formulate further questions</li> <li>draw conclusions related to the problem or question; e.g.: <ul style="list-style-type: none"> <li>recommendations</li> <li>management actions</li> <li>further research</li> </ul> </li> <li>communicate the results of research through written reports and oral presentations.</li> </ul>	<p>Limit, define and refine.</p> <p>Written review and summary of relevant literature.</p> <p>Submit a written plan.</p> <p>Consider:</p> <ul style="list-style-type: none"> <li>species count</li> <li>observation of behaviours</li> <li>experimental controls, groups and variables.</li> </ul> <p>Use data tables, graphs, anecdotal reports, photographic records, videotape.</p> <p>Consider:</p> <ul style="list-style-type: none"> <li>logical relationships</li> <li>significant elements and implications</li> <li>potential sources of bias</li> <li>limitations of data.</li> </ul> <p>Display boards.</p>

**MODULE WLD3050: WILDLIFE MANAGEMENT 1 (BASIC PRINCIPLES)****Level:** Advanced**Theme:** Management and Conservation**Prerequisite:** WLD3040 Wildlife Research**Module Description:** Students describe the functions and processes of wildlife management, and identify issues that may affect the development of a wildlife management plan.**Module Parameters:** Access to government and community agencies responsible for the sustainable management of spaces and species.**Note:** This module is a prerequisite for WLD3060: Wildlife Management 2. It is recommended that students focus attention on a common theme (i.e., a space or species of particular relevance) throughout WLD3040, WLD3050 and WLD3060.**Curriculum and Assessment Standards**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<i>The student will:</i> <ul style="list-style-type: none"> <li>describe the functions of wildlife management</li> </ul>	<i>Assessment of student achievement should be based on:</i> <ul style="list-style-type: none"> <li>a teacher-prepared assessment in which the student demonstrates knowledge of conservation, preservation and the function of wildlife management.</li> </ul> <i>Assessment Tool</i> <i>Sample Assessment Items: Wildlife Management, WLD3050-1</i>	20
<ul style="list-style-type: none"> <li>identify and explain major components of a wildlife management plan</li> </ul>	<i>Standard</i> <i>Response indicating 70% mastery</i> <ul style="list-style-type: none"> <li>given information regarding a current plan for managing a wildlife space or species, identifying major components of the plan and applying each to the management of the space or species.</li> </ul> <i>Assessment Tool</i> <i>Knowledge/Application Assessment: Components of Wildlife Management, WLD3050-2</i>	40
	<i>Standard</i> <i>Identify components and applications of wildlife management within the context of one space or species to a standard of 3 on the rating scale</i>	

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# **MODULE WLD3050: WILDLIFE MANAGEMENT 1 (BASIC PRINCIPLES) (continued)**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>describe alternatives and consequences associated with current issues involving wildlife management</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>completing a research project on the management history of one space or species in Alberta.</li> </ul> <p><i>Assessment Tool</i>  <i>Research Process: A Wildlife Management History, WLD3050-3</i></p> <p><i>Standard</i>  <i>Complete research to a standard of 3 on the rating scale</i></p> <ul style="list-style-type: none"> <li>given access to information regarding current issues in wildlife management: <ul style="list-style-type: none"> <li>identifying different perspectives/points of view relevant to three current issues</li> <li>critically analyzing one of the issues.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Issue Analysis: Wildlife Management WLD3050-4</i></p> <p><i>Standard</i>  <i>Identify and analyze issues to a standard of 3 on the rating scale</i></p> <ul style="list-style-type: none"> <li>given a complex issue regarding the management of a wildlife space or species: <ul style="list-style-type: none"> <li>negotiating and debating the issue while assuming the role of one or more stakeholder groups</li> <li>preparing a position paper on the issue that outlines a recommended plan of action.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Negotiation and Debate: Advanced Level, WLDNEG-3</i>  <i>Position Paper: Wildlife Management, WLD3050-5</i></p> <p><i>Standard</i>  <i>Address criteria in negotiation/debate and the position paper to a standard of 3 on the rating scale</i></p>	<p>40</p>
<ul style="list-style-type: none"> <li>demonstrate basic competencies.</li> </ul>	<ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tools</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>



**MODULE WLD3050: WILDLIFE MANAGEMENT 1 (BASIC PRINCIPLES) (continued)**

Concept	Specific Learner Expectations	Notes
Functions of Wildlife Management	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>describe wildlife management as a process that ensures long-term viability of spaces, species and ecosystems</li> <li>explain how wildlife management involves the preservation of endangered spaces and species, and conservation of all other spaces and species</li> <li>analyze relationships between wildlife research and wildlife management.</li> </ul>	<p>See:</p> <ul style="list-style-type: none"> <li>A Wildlife Policy for Canada</li> <li>The Status of Wildlife in Alberta</li> <li><i>Project Wild</i> (Section 4: Management and Conservation).</li> </ul> <p>Compare preservation with conservation.</p> <p>Examine ways of surveying the demographics of specific species:</p> <ul style="list-style-type: none"> <li>migratory species (international)</li> <li>indigenous species (local).</li> </ul>
The Management Process	<ul style="list-style-type: none"> <li>explain how wildlife management programs and policies are developed through political, social, economic and scientific decisions</li> <li>identify and describe basic steps involved in developing a wildlife management plan; e.g.: <ul style="list-style-type: none"> <li>state goals and objectives</li> <li>collect data and conduct research</li> <li>gather government and nongovernment input</li> <li>consider alternatives, consequences and potential conflicts</li> <li>select a course of action</li> <li>implement the action plan</li> <li>monitor and evaluate outcomes</li> <li>make recommendations and revisions.</li> </ul> </li> </ul>	<p>Investigate current management plans:</p> <ul style="list-style-type: none"> <li>North American Waterfowl Management Plan</li> <li>Peregrine Falcon Recovery Plan</li> <li>Vermilion Lakes Area Plan</li> <li>Kootenay National Park Management Plan.</li> </ul> <p>See:</p> <ul style="list-style-type: none"> <li><i>Prairie Conservation: A Landowner's Guide.</i></li> </ul>

**MODULE WLD3050: WILDLIFE MANAGEMENT 1 (BASIC PRINCIPLES) (continued)**

Concept	Specific Learner Expectations	Notes
Issues in Wildlife Management	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>analyze a variety of issues and problems affecting the management of wildlife spaces and species; e.g.: <ul style="list-style-type: none"> <li>– preservation versus conservation</li> <li>– problems with an “ecosystem management” approach</li> <li>– political boundaries and the species/people involved</li> <li>– legislation versus no legislation</li> <li>– public perception of wildlife management</li> <li>– the value of wildlife</li> <li>– environmental impact assessment plans and legislation</li> </ul> </li> <li>explain how philosophies and goals of different wildlife management practices are sometimes incompatible with each other, and how conflicts and trade-offs may occur.</li> </ul>	<p>Conduct interviews with naturalists, conservationists, preservationists, wildlife managers and/or stakeholder groups (see “Guidelines for Interviewing People,” <i>Project Wild</i>, p. 436).</p> <p>Student presentations and debates.</p>

**MODULE WLD3060: WILDLIFE MANAGEMENT 2 (APPLICATIONS)****Level:** Advanced**Theme:** Management and Conservation**Prerequisite:** WLD3050 Wildlife Management 1 (Basic Principles)**Module Description:** Students develop and present a plan for managing a wildlife space or species.**Module Parameters:** Access to government and community agencies responsible for the sustainable management of spaces and species.**Note:** It is recommended that students focus attention on a common theme (i.e., a space or species of particular relevance) throughout WLD3040, WLD3050 and WLD3060.**Curriculum and Assessment Standards**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>explain the basic principles of wildlife management</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>explaining the general objectives of wildlife management.</li> </ul> <p><i>Assessment Tool</i>  <i>Knowledge/Application Assessment: Principles of Wildlife Management, WLD3060-1</i></p> <p><i>Standard</i>  <i>Respond to a standard of 3 on the rating scale</i></p> <ul style="list-style-type: none"> <li>the results of an interview with a wildlife manager regarding wildlife management principles.</li> </ul> <p><i>Assessment Tool</i>  <i>Interview Techniques: Wildlife Manager, WLD3060-2</i></p> <p><i>Standard</i>  <i>Apply interview techniques to a standard of 3 on the rating scale</i></p>	20
<ul style="list-style-type: none"> <li>develop and present a wildlife management plan</li> </ul>	<ul style="list-style-type: none"> <li>a summary and analysis of critical components included in an existing plan for managing a wildlife space or species. Summary and analysis to address: <ul style="list-style-type: none"> <li>data collection and research techniques</li> <li>management strategies/tools in use</li> <li>outcomes/results and suggested revisions.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Summary and Analysis: A Wildlife Management Plan, WLD3060-3</i></p> <p><i>Standard</i>  <i>Complete summary and analysis to a standard of 3 on the rating scale</i></p>	80



# **MODULE WLD3060: WILDLIFE MANAGEMENT 2 (APPLICATIONS) (continued)**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>developing and presenting a plan for managing a wildlife space or species. Management plan to address: <ul style="list-style-type: none"> <li>the concerns of three or more stakeholder groups</li> <li>management goals and priorities</li> <li>research strategies/actions</li> <li>maps and monitoring strategies.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Assessment Criteria: Developing a Wildlife Management Plan, WLD3060–4</i>  <i>Presentations/Reports: Advanced Level, WLDPRE–3</i></p> <p><i>Standard</i>  <i>Develop and present the plan to a standard of 3 on the rating scale</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tools</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
Basic Principles	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>explain sustainable management within the context of wildlife spaces and species</li> <li>explain how decisions involving wildlife in Canada are made by local, provincial and federal government agencies and private landowners</li> <li>identify local opportunities for consultation and public involvement in wildlife management decisions.</li> </ul>	<p>Suggested resources include:</p> <ul style="list-style-type: none"> <li><i>A Wildlife Policy for Canada</i></li> <li><i>The Status of Alberta Wildlife</i></li> <li><i>Project Wild Activity Guide</i></li> <li><i>Alberta Conservation and Hunter Education.</i></li> </ul> <p>Field studies. Interviews. Oral Presentations.</p>

**MODULE WLD3060: WILDLIFE MANAGEMENT 2 (APPLICATIONS) (continued)**

Concept	Specific Learner Expectations	Notes
Planning Process	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• identify short- and long-term goals for the management of a wildlife space or species</li> <li>• identify scientific, economic and social factors that need to be addressed through the management plan</li> <li>• describe the views of different stakeholders and resolve conflicts that may arise; e.g.: <ul style="list-style-type: none"> <li>– recreational</li> <li>– environmental</li> <li>– aboriginal</li> <li>– commercial</li> </ul> </li> <li>• show that consultation with other resource users and public involvement has been incorporated into the planning process</li> <li>• identify alternative means of achieving the management goals, and select preferred alternatives</li> <li>• describe permits, licences or other legal agreements that may be required</li> <li>• devise a set of actions and present the management plan; e.g.: <ul style="list-style-type: none"> <li>– a general description and background</li> <li>– long-term management objectives</li> <li>– short-term management objectives</li> <li>– proposed standards and guidelines</li> <li>– a schedule of short-term management activities</li> </ul> </li> <li>• prepare a map to accompany and elaborate upon the management plan; e.g.: <ul style="list-style-type: none"> <li>– boundaries</li> <li>– land cover and other resources in the area</li> <li>– physical features</li> <li>– history of past development</li> <li>– road access</li> <li>– proposed development activities</li> </ul> </li> <li>• describe techniques for monitoring the management plan to ensure that goals are being achieved.</li> </ul>	<p>See sample management plans described in:</p> <ul style="list-style-type: none"> <li>• <i>North American Waterfowl Management Plan</i></li> <li>• <i>Prairie Conservation: A Landowner's Guide.</i></li> </ul> <p>Consider species that are at risk <u>OR</u> problem wildlife.</p> <p>Discuss management tools required to increase or decrease a population:</p> <ul style="list-style-type: none"> <li>• environmental manipulation</li> <li>• direct population control.</li> </ul> <p>Examine concerns regarding biological management tools:</p> <ul style="list-style-type: none"> <li>• B.t.k. treatments for spruce budworm</li> <li>• specific insects that eat purple loosestrife.</li> </ul> <p>Tables and graphs.</p> <p>Diagrams.</p> <p>Webbing (mind maps).</p> <p>Display boards.</p> <p>Oral presentations.</p> <p>Evaluation.</p> <p>Forecasting.</p>

**MODULE WLD3090: ISSUES IN WILDLIFE 2 (NEGOTIATION & DEBATE)****Level:** Advanced**Theme:** Management and Conservation**Prerequisite:** WLD2090 Issues in Wildlife 1 (Research & Analysis)**Module Description:** Students examine the complexity of wildlife issues affecting Alberta and the rest of the world, and demonstrate individual and shared actions that foster sustainable management of wildlife.**Module Parameters:** Access to relevant government and community resources.**Curriculum and Assessment Standards**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<i>The student will:</i> <ul style="list-style-type: none"><li>identify and compare social, economic and environmental perspectives regarding a range of current wildlife issues</li></ul>	<i>Assessment of student achievement should be based on:</i> <ul style="list-style-type: none"><li>analyzing alternatives and consequences associated with each of five wildlife issues. Alternatives and consequences to address relevant social, economic and environmental perspectives. <i>Assessment Tool</i> <i>Issue Analysis: Alternatives and Consequences, WLD3090-1</i> <i>Standard</i> <i>Analyze five issues to a standard of 3 on the rating scale</i></li><li>a critique of one newspaper/magazine article regarding a wildlife issue. Critique to address:<ul style="list-style-type: none"><li>range of viewpoints/biases evident</li><li>recommended course of action.</li></ul><i>Assessment Tool</i> <i>Guidelines to Critiquing Media Information, WLDMED</i> <i>Standard</i> <i>Critique one article to a standard of 3 on the rating scale</i></li></ul>	30

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**MODULE WLD3090: ISSUES IN WILDLIFE 2 (NEGOTIATION & DEBATE) (continued)**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>compare and contrast issues and trends involving wildlife in Canada with similar issues and trends in other parts of the world</li> <li>present a plan of action for the sustainable management of wildlife</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>completing a research project on one international wildlife issue. Research to address: <ul style="list-style-type: none"> <li>an explanation of the issue and stakeholders involved</li> <li>a survey of different viewpoints regarding the issue</li> <li>a statement of personal position regarding the issue and rationale for the position taken</li> <li>suggested strategies/actions for dealing with the issue</li> <li>reference to a related wildlife issue in Canada and/or Alberta.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Research Process: A Wildlife Issue, WLD3090–2</i></p> <p><i>Standard</i>  <i>Complete research to a standard of 3 on the rating scale</i></p>	30
	<ul style="list-style-type: none"> <li>given a current issue regarding wildlife conservation and management: <ul style="list-style-type: none"> <li>negotiating and debating the issue while assuming the role of one or more stakeholder groups</li> <li>preparing and presenting a position paper that outlines a responsible course of action.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Negotiation and Debate: Advanced Level, WLDNEG–3</i>  <i>Position Paper: Wildlife Conservation and Management, WLD3090–3</i></p> <p><i>Standard</i>  <i>Address criteria in negotiation/debate and the position paper to a standard of 3 on the rating scale</i></p> <ul style="list-style-type: none"> <li>a proposal and rationale (oral, written or visual) for: <ul style="list-style-type: none"> <li>personal action that will support wildlife conservation and management</li> <li>a leadership role/community program that will support wildlife conservation and management.</li> </ul> </li> </ul> <p><i>Assessment Tool</i>  <i>Assessment Criteria: Proposal for Environmental Action, WLDPRO</i>  <i>Sample Proposals: Wildlife Enhancement, WLDSAM</i></p> <p><i>Standard</i>  <i>Complete each proposal to a standard of 3 on the rating scale</i></p>	40

**MODULE WLD3090: ISSUES IN WILDLIFE 2 (NEGOTIATION & DEBATE) (continued)**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tools</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
Issues Involve Alternatives	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>describe past and present trends in the recreational and/or commercial use of a wildlife space or species</li> <li>describe ways in which stakeholder groups make use of the judicial, legislative and regulatory systems in working toward their objectives</li> <li>analyze differing points of view regarding how, when and to what degree the space or species should be used</li> <li>analyze issues concerning the scientific, biological, aesthetic, economic and/or intrinsic value of the space or species.</li> </ul>	<p>See <i>Project Wild</i> (Section 6: Trends, Issues and Consequences).</p> <p>Written/oral critique of relevant periodical literature and videos.</p> <p>Independent research on an issue of personal interest.</p>
Global Issues and Trends	<ul style="list-style-type: none"> <li>compare and contrast a Canadian issue involving wildlife with a similar issue in other parts of the world; e.g.: <ul style="list-style-type: none"> <li>habitat loss</li> <li>distribution, diversity and abundance of species</li> </ul> </li> </ul>	<p>Review magazine articles that focus on Canadian and global wildlife issues (e.g., <i>Equinox</i>, <i>Canadian Geographic</i>, <i>International Wildlife</i>).</p>

**MODULE WLD3090: ISSUES IN WILDLIFE 2 (NEGOTIATION & DEBATE) (continued)**

Concept	Specific Learner Expectations	Notes
Global Issues and Trends (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>research global impacts of the recreational and/or commercial use of a wildlife space or species; e.g.: <ul style="list-style-type: none"> <li>social and cultural</li> <li>economic</li> <li>environmental</li> </ul> </li> <li>infer the long-range effects of acquiring, protecting, improving and restoring wildlife habitat in Canada and other parts of the world.</li> </ul>	<p>Independent research on topic of global significance.</p> <p>Student debates.</p> <p>Forecasting.</p>
Personal and Shared Actions	<ul style="list-style-type: none"> <li>compare and contrast different philosophies, ethics and alternatives regarding how best to ensure its health and viability of a wildlife space or species</li> <li>evaluate the goals and objectives of one or more wildlife conservation groups</li> <li>identify and describe a global issue regarding the consumptive and/or non-consumptive use of wildlife; e.g.: <ul style="list-style-type: none"> <li>conduct research</li> <li>develop a position</li> <li>participate in debate</li> </ul> </li> <li>devise a plan for the use of wildlife; e.g.: <ul style="list-style-type: none"> <li>conduct research</li> <li>generate alternatives</li> <li>agree to a workable solution</li> </ul> </li> <li>demonstrate responsible and ethical actions in relation to wildlife and the environment; e.g.: <ul style="list-style-type: none"> <li>personal actions</li> <li>leadership roles.</li> </ul> </li> </ul>	<p>Group projects involving discussions, consensus building, debate and panel discussion.</p> <p>See <i>Project Wild</i> (Section 7: Responsible Human Actions).</p> <p>Participation in group process is essential.</p> <p>Implement a course of action suggested through group discussion and consensus building.</p>



# WILDLIFE

## SECTION G: ASSESSMENT TOOLS

The following pages comprise background information and strategies for assessing student achievement using the assessment tools that are listed in Sections D, E and F of this Guide.

This section of the Guide to Standards and Implementation has been designed to provide a common base of understanding about the level of competencies students are expected to demonstrate to successfully complete a module. The goal is to establish assessment standards for junior and senior high school students that are fair, credible and challenging.

These tools will assist teachers throughout the province to more consistently assess student achievement. The purpose of expanding on the assessment standards is to:

- increase confidence among students, parents, business/industry and post-secondary that students can demonstrate the competencies specified in the modules they have completed
- encourage fairness and equity in how students' efforts are judged
- enable learners to focus effort on key learnings
- support teachers and community partners in planning and implementing CTS.

These tools were validated during the optional stage of CTS implementation.

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## ASSESSING STUDENT ACHIEVEMENT IN CTS

The CTS assessment standards assess two basic forms of competency:

- What can a student *do*?
  - **make** a product (e.g., wood bowl, report, garment)
  - **demonstrate** a process
    - strand-related competencies (e.g., keyboarding, hair cutting, sewing techniques, lab procedures)
    - basic competencies (e.g., resource use, safety procedures, teamwork).
- What does a student *know*?
  - knowledge base needed to demonstrate a competency (link theory and practice).

### CTS Defines *Summative* Assessment Standards

The assessment standards and tools defined for the CTS modules, referenced in Sections D, E and F of this Guide, focus on the final (or summative) assessment of student achievement.

Assessment throughout the learning period (formative assessment) will continue to evaluate how students are progressing. Teachers direct and respond to students' efforts to learn—setting and marking tasks and assignments, indicating where improvement is needed, sending out interim reports, congratulating excellence, etc.

Teachers will decide which instructional and assessment strategies to apply during the formative learning period. As formative and summative assessment are closely linked, some teachers may wish to modify the tools included in this section to use during the instructional process. Teachers may also develop their own summative assessment tools as long as the standards are consistent with the minimum expectations outlined by Alberta Education.

## Grading and Reporting Student Achievement

When a student can demonstrate ALL of the exit-level competencies defined for the module (module learner expectations), the teacher will designate the module as “successfully completed.” The teacher will then use accepted grading practices to determine the percentage grade to be given for the module—a mark not less than 50%.

The time frame a teacher allows a student to develop the exit-level competency is a local decision. NOTE: The Senior High School Handbook specifies that students must have access to 25 hours of instruction for each credit. Students may, however, attain the required competencies in less time and may proceed to other modules.

Teachers are encouraged to consult their colleagues to ensure grading practices are as consistent as possible.

High school teachers may wish to refer to “Directions for Reporting Student Achievement in CTS” for information on how to use the CTS course codes to report the credits that students have earned to Alberta Education. (Copies of this document have been forwarded to superintendents and senior high school principals.)

### Components of Assessment Standards in CTS

The following components are included in each module:

- **module learner expectations** (in the shaded left column of the module) define the exit-level competencies students are expected to achieve to complete a module. Each MLE defines and describes critical behaviours that can be measured and observed. The student must meet the standard specified for **ALL** MLEs within a module to be successful.
- **suggested emphasis** (in the right column of the module) provides a guideline for the

relative significance of each MLE and can be used to organize for instruction.

- **criteria and conditions** (in the middle column of the module) set the framework for the assessment of student competency, specifying the minimum standard for performance and including a reference to assessment tools, where appropriate.

*Criteria* define the behaviours that a student must demonstrate to meet the designated standard. For example, the criteria could describe the various techniques that must be demonstrated when using a tool, and/or describe the minimum components of a project the student must complete.

*Conditions* outline the specifications under which a student's competency can be judged. For example, the conditions could specify whether the assessment should be timed or not, or if the student should be allowed to access support resources or references.

*Standard* may be defined by (1) assessment tools, which are referenced in this section (or sometimes in approved learning resources) and/or (2) "illustrative examples" of student work, if appropriate.

*Assessment Tools* included in this section of the Guide tend to be of two types:

- tools generic to a strand or to the entire CTS program; e.g., a standard five-point rating scale is used in all strands. Other generic tools include assessing reports and presentations and lab safety checklists. (*Names of these tools include the strand code [e.g., "INF" for Information Processing] and a code for the type of tool [e.g., "TDENT" for Text-Data Entry].*)

- tools specific to a module; e.g., assessment checklist for assessing a venture plan in Enterprise and Innovation or a checklist for sketching, drawing and modelling in Design Studies. (*Names of these tools include the module code; e.g., "INF1010-1" indicating that it is the first module-specific tool used in Information Processing Module 1010.*)

## Development and Validation Processes

The "Criteria and Conditions" and "Suggested Emphasis" columns have been validated with extensive input from teachers, professional associations/contacts and post-secondary institutions. The goal was to prepare well-structured assessment standards and related assessment tools that:

- establish an appropriate level of challenge and rigour
- relate directly to the type of learning described in the curriculum standard
- are easy to understand
- are efficient to implement
- can provide a consistent measure of what was expected to be measured.

As students and teachers work with the assessment standards and tools, it is expected that levels of performance will increase as more and more students are able to achieve the minimum standard. Therefore, the assessment standards and related tools will continue to be monitored, and revised as necessary to ensure appropriate levels of rigour and challenge, and successful transitions for students as they leave high school and enter the workplace or related post-secondary programs.



## ASSESSING STUDENT ACHIEVEMENT IN WILDLIFE

Assessing student achievement in Wildlife involves gathering information about what a student knows and is able to do, and comparing this information with learning outcomes defined by the curriculum (i.e., module learner expectations, assessment criteria and conditions, illustrative examples/reference sets).

Summative assessment for each module in Wildlife will focus attention on process (e.g., how the student approaches/performs particular tasks) and product (e.g., quality characteristics of the task performed, item produced or service rendered). While there are also knowledge-based components of learning within each module, a greater emphasis has been suggested for learning that involves the transfer/application of knowledge in task- or service-oriented situations.

### Assessment Strategies and Tools

A variety of tools have been provided for your reference and use. In the development of the assessment materials there has been an attempt to keep it as simple as possible while also providing guidance and assistance to teachers. The tools are intended to help you assess students' work as accurately and consistently as possible by stating standards of performance for elements felt to be important within the curriculum as a whole or in specified modules. They also provide standards for basic competencies students should be able to demonstrate while engaging in learning.

The tools that have been developed are intended to be used as summative assessment tools. Depending on the way the classroom is organized, they may be used when the student has indicated he or she is ready for the final assessment or by the entire class at the end of the learning period.

### Tools Generic to CTS

The generic rating scale has been used to develop several of the tools in CTS. A generic framework for assessing the processes CTS students apply in completing a task or project is included in this

section. It is based on the notion that students will follow a process as they work through their projects and that this process has a number of sequential steps. The framework shows the increasing expectations from the introductory, to the intermediate, to the advanced level.

Some assessment tools, e.g., Presentations/Reports (CTSPRE) are generic to CTS and have been included in this section. In assessing MLEs at the introductory level, PRE100 would be used. Since the content portion of this tool must relate specifically to an MLE in a module, the tool has been adapted, labelled and included under Assessment Tools Specific to the Wildlife strand, WLD, and to the module, e.g., WLD1010 (module number), and the tool number (within the module), e.g., WLD1010-1.

The Basic Competencies Reference Guide can be used directly as a checklist or as a guide to assess these competencies through other teacher-developed tools.

### Tools Generic to Wildlife

Assessment tools generic to Wildlife have been developed to assist in assessing student performance in key areas of learning across the scope and sequence. The generic tools communicate minimum performance standards for:

- conducting research, preparing reports and making presentations
- demonstrating practical skills in outdoor survival and environmental ethics
- conducting laboratory and field-based investigations
- analyzing, negotiating and debating wildlife- and environment-related issues
- proposing personal/shared actions that foster environmental citizenship
- exploring career trends and conducting searches of employment opportunities.

The generic tools, referenced as applicable throughout each module in the conditions and criteria column, are identified with a six- or nine-letter code (e.g., WLDMAP, WLDLOG-VOL). Generic tools developed for use in modules at a

specific level are further identified by a number (e.g., WLDAPRE-1 for introductory, WLDAPRE-2 for intermediate, WLDAPRE-3 for advanced).

### **Tools Specific to Wildlife Modules**

Other assessment tools have been developed to assess competencies that are unique to specific modules within the Wildlife strand. These “module-specific” tools, also referenced in the criteria and conditions column for each module, are identified by the module number followed by a tool number (e.g., WLD1070-1 for the first module-specific tool in module WLD1070).

In some instances, authorized learning resources have been identified as assessment tools for specific modules. These learning resources usually contain test banks and other assessment strategies considered effective in establishing minimum standards for achievement.



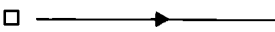
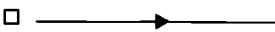
Where appropriate, “Illustrative Examples” or “Sample Assignments/Projects” have been provided in a further attempt to communicate realistic expectations and acceptable standards of achievement.

## BASIC COMPETENCIES REFERENCE GUIDE





The chart below outlines basic competencies that students endeavour to develop and enhance in each of the CTS strands and modules. Students' basic competencies should be assessed through observations involving the student, teacher(s), peers and others as they complete the requirements for each module. In general, there is a progression of task complexity and student initiative as outlined in the Developmental Framework\*. As students progress through Stages 1, 2, 3 and 4 of this reference guide, they build on the competencies gained in earlier stages. Students leaving high school should set themselves a goal of being able to demonstrate Stage 3 performance.

*Suggested strategies for classroom use include:*

- having students rate themselves and each other
- using in reflective conversation between teacher and student
- highlighting areas of strength
- tracking growth in various CTS strands
- highlighting areas upon which to focus
- maintaining a student portfolio.

Stage 1— The student:	Stage 2— The student:	Stage 3— The student:	Stage 4— The student:
<b>Managing Learning</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> comes to class prepared for learning</li> <li><input type="checkbox"/> follows basic instructions, as directed</li> <li><input type="checkbox"/> acquires specialized knowledge, skills and attitudes</li> <li><input type="checkbox"/> identifies criteria for evaluating choices and making decisions</li> <li><input type="checkbox"/> uses a variety of learning strategies</li> </ul>	 <ul style="list-style-type: none"> <li><input type="checkbox"/> follows instructions, with limited direction</li> <li><input type="checkbox"/> sets goals and establishes steps to achieve them, with direction</li> <li><input type="checkbox"/> applies specialized knowledge, skills and attitudes in practical situations</li> <li><input type="checkbox"/> identifies and applies a range of effective strategies for solving problems and making decisions</li> <li><input type="checkbox"/> explores and uses a variety of learning strategies, with limited direction</li> </ul>	 <ul style="list-style-type: none"> <li><input type="checkbox"/> follows detailed instructions on an independent basis</li> <li><input type="checkbox"/> sets clear goals and establishes steps to achieve them</li> <li><input type="checkbox"/> transfers and applies specialized knowledge, skills and attitudes in a variety of situations</li> <li><input type="checkbox"/> uses a range of critical thinking skills to evaluate situations, solve problems and make decisions</li> <li><input type="checkbox"/> selects and uses effective learning strategies</li> <li><input type="checkbox"/> cooperates with others in the effective use of learning strategies</li> </ul>	  <ul style="list-style-type: none"> <li><input type="checkbox"/> demonstrates self-direction in learning, goal setting and goal achievement</li> <li><input type="checkbox"/> transfers and applies learning in new situations; demonstrates commitment to lifelong learning</li> <li><input type="checkbox"/> thinks critically and acts logically to evaluate situations, solve problems and make decisions</li> <li><input type="checkbox"/> provides leadership in the effective use of learning strategies</li> </ul>
<b>Managing Resources</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> adheres to established timelines; uses time/schedules/planners effectively</li> <li><input type="checkbox"/> uses information (material and human resources), as directed</li> <li><input type="checkbox"/> uses technology (facilities, equipment, supplies), as directed, to perform a task or provide a service</li> <li><input type="checkbox"/> maintains, stores and/or disposes of equipment and materials, as directed</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> creates and adheres to timelines, with limited direction; uses time/schedules/planners effectively</li> <li><input type="checkbox"/> accesses and uses a range of relevant information (material and human resources), with limited direction</li> <li><input type="checkbox"/> uses technology (facilities, equipment, supplies), as appropriate, to perform a task or provide a service, with minimal assistance and supervision</li> <li><input type="checkbox"/> maintains, stores and/or disposes of equipment and materials, with limited assistance</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> creates and adheres to detailed timelines on an independent basis; prioritizes task; uses time/schedules/planners effectively</li> <li><input type="checkbox"/> accesses a range of information (material and human resources), and recognizes when additional resources are required</li> <li><input type="checkbox"/> selects and uses appropriate technology (facilities, equipment, supplies) to perform a task or provide a service on an independent basis</li> <li><input type="checkbox"/> maintains, stores and/or disposes of equipment and materials on an independent basis</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> creates and adheres to detailed timelines; uses time/schedules/planners effectively; prioritizes tasks on a consistent basis</li> <li><input type="checkbox"/> uses a wide range of information (material and human resources) in order to support and enhance the basic requirement</li> <li><input type="checkbox"/> recognizes the monetary and intrinsic value of managing technology (facilities, equipment, supplies)</li> <li><input type="checkbox"/> demonstrates effective techniques for managing facilities, equipment and supplies</li> </ul>
<b>Problem Solving and Innovation</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> participates in problem solving as a process</li> <li><input type="checkbox"/> learns a range of problem-solving skills and approaches</li> <li><input type="checkbox"/> practices problem-solving skills by responding appropriately to a clearly defined problem, specified goals and constraints, by: <ul style="list-style-type: none"> <li>– generating alternatives</li> <li>– evaluating alternatives</li> <li>– selecting appropriate alternative(s)</li> <li>– taking action</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> identifies the problem and selects an appropriate problem-solving approach, responding appropriately to specified goals and constraints</li> <li><input type="checkbox"/> applies problem-solving skills to a directed or a self-directed activity, by: <ul style="list-style-type: none"> <li>– generating alternatives</li> <li>– evaluating alternatives</li> <li>– selecting appropriate alternative(s)</li> <li>– taking action</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> thinks critically and acts logically in the context of problem solving</li> <li><input type="checkbox"/> transfers problem-solving skills to real-life situations, by generating new possibilities</li> <li><input type="checkbox"/> prepares implementation plans</li> <li><input type="checkbox"/> recognizes risks</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> identifies and resolves problems efficiently and effectively</li> <li><input type="checkbox"/> identifies and suggests new ideas to get the job done creatively, by: <ul style="list-style-type: none"> <li>– combining ideas or information in new ways</li> <li>– making connections among seemingly unrelated ideas</li> <li>– seeking out opportunities in an active manner</li> </ul> </li> </ul>



Stage 1— <i>The student:</i>	Stage 2— <i>The student:</i>	Stage 3— <i>The student:</i>	Stage 4— <i>The student:</i>
<b>Communicating Effectively</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> uses communication skills; e.g., reading, writing, illustrating, speaking</li> <li><input type="checkbox"/> uses language in appropriate context</li> <li><input type="checkbox"/> listens to understand and learn</li> <li><input type="checkbox"/> demonstrates positive interpersonal skills in selected contexts</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> communicates thoughts, feelings and ideas to justify or challenge a position, using written, oral and/or visual means</li> <li><input type="checkbox"/> uses technical language appropriately</li> <li><input type="checkbox"/> listens and responds to understand and learn</li> <li><input type="checkbox"/> demonstrates positive interpersonal skills in many contexts</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> prepares and effectively presents accurate, concise, written, visual and/or oral reports providing reasoned arguments</li> <li><input type="checkbox"/> encourages, persuades, convinces or otherwise motivates individuals</li> <li><input type="checkbox"/> listens and responds to understand, learn and teach</li> <li><input type="checkbox"/> demonstrates positive interpersonal skills in most contexts</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> negotiates effectively, by working toward an agreement that may involve exchanging specific resources or resolving divergent interests</li> <li><input type="checkbox"/> negotiates and works toward a consensus</li> <li><input type="checkbox"/> listens and responds to understand, learn, teach and evaluate</li> <li><input type="checkbox"/> promotes positive interpersonal skills among others</li> </ul>
<b>Working with Others</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> fulfills responsibility in a group project</li> <li><input type="checkbox"/> works collaboratively in structured situations with peer members</li> <li><input type="checkbox"/> acknowledges the opinions and contributions of others in the group</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> cooperates to achieve group results</li> <li><input type="checkbox"/> maintains a balance between speaking, listening and responding in group discussions</li> <li><input type="checkbox"/> respects the feelings and views of others</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> seeks a team approach, as appropriate, based on group needs and benefits; e.g., idea potential, variety of strengths, sharing of workload</li> <li><input type="checkbox"/> works in a team or group: <ul style="list-style-type: none"> <li>– encourages and supports team members</li> <li>– helps others in a positive manner</li> <li>– provides leadership/ followership as required</li> <li>– negotiates and works toward consensus as required</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> leads, where appropriate, mobilizing the group for high performance</li> <li><input type="checkbox"/> understands and works within the context of the group</li> <li><input type="checkbox"/> prepares, validates and implements plans that reveal new possibilities</li> </ul>
<b>Demonstrating Responsibility</b> <p><b>Attendance</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> demonstrates responsibility in attendance, punctuality and task completion</li> </ul> <p><b>Safety</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> follows personal and environmental health and safety procedures</li> <li><input type="checkbox"/> identifies immediate hazards and their impact on self, others and the environment</li> <li><input type="checkbox"/> follows appropriate/emergency response procedures</li> </ul> <p><b>Ethics</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> makes personal judgements about whether or not certain behaviours/actions are right or wrong</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> recognizes and follows personal and environmental health and safety procedures</li> <li><input type="checkbox"/> identifies immediate and potential hazards and their impact on self, others and the environment</li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> assesses how personal judgements affect other peer members and/or family; e.g., home and school</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> establishes and follows personal and environmental health and safety procedures</li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> assesses the implications of personal/group actions within the broader community; e.g., workplace</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> transfers and applies personal and environmental health and safety procedures to a variety of environments and situations</li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> </li> <li><input type="checkbox"/> demonstrates accountability for actions taken to address immediate and potential hazards</li> <li><input type="checkbox"/> analyzes the implications of personal/group actions within the global context</li> <li><input type="checkbox"/> states and defends a personal code of ethics as required</li> </ul>
<b>★ Developmental Framework</b> <ul style="list-style-type: none"> <li>• Simple task</li> <li>• Structured environment</li> <li>• Directed learning</li> </ul>	<ul style="list-style-type: none"> <li>• Task with limited variables</li> <li>• Less structured environment</li> <li>• Limited direction</li> </ul>	<ul style="list-style-type: none"> <li>• Task with multiple variables</li> <li>• Flexible environment</li> <li>• Self-directed learning, seeking assistance as required</li> </ul>	<ul style="list-style-type: none"> <li>• Complex task</li> <li>• Open environment</li> <li>• Self-directed/self-motivated</li> </ul>

# GENERIC RATING SCALE

S C A L E	RUBRIC STATEMENT (included in assessment tool/statements in <i>italics</i> are optional)	IS TASK/ PROJECT COMPLETED?	PROBLEM SOLVING: STUDENT INITIATIVE VS TEACHER DIRECTION/ SUPPORT	USE OF TOOLS, MATERIALS, PROCESSES	STANDARDS OF QUALITY/ PRODUCTIVITY	TEAMWORK LEADERSHIP	SERVICE CLIENT/ CUSTOMER
<b>4</b>	<i>The student:</i> exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence. <i>Quality, particularly details and finishes, and productivity are consistent and exceed standards. Leads others to contribute team goals. Analyzes and provides effective client/customer services beyond expectations.</i>	Exceeds defined outcomes.	Plans and solves problems effectively and creatively in a self-directed manner.	Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.	<i>Quality, particularly details and finishes, and productivity are consistent and exceed standards.</i>	<i>Leads others to contribute team goals.</i>	<i>Analyzes and provides effective client/customer services beyond expectations.</i>
<b>3</b>	meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively. <i>Quality and productivity are consistent. Works cooperatively and contributes ideas and suggestions that enhance team effort. Analyzes and provides effective client/customer services.</i>	Meets defined outcomes.	Plans and solves problems in a self-directed manner.	Tools, materials and/or processes are selected and used efficiently and effectively.	<i>Quality and productivity are consistent.</i>	<i>Works cooperatively and contributes ideas and suggestions that enhance team effort.</i>	<i>Analyzes and provides effective client/customer services.</i>
<b>2</b>	meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately. <i>Quality and productivity are reasonably consistent. Works cooperatively to achieve team goals. Identifies and provides customer/client services.</i>	Meets defined outcomes.	Plans and solves problems with limited assistance.	Tools, materials and/or processes are selected and used appropriately.	<i>Quality and productivity are reasonably consistent.</i>	<i>Works cooperatively to achieve team goals.</i>	<i>Identifies and provides customer/client services.</i>
<b>1</b>	meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately. <i>Quality and productivity are reasonably consistent. Works cooperatively. Provides a limited range of customer/client services.</i>	Meets defined outcomes.	Follows a guided plan of action.	A limited range of tools, materials and/or processes are used appropriately.	<i>Quality and productivity are reasonably consistent.</i>	<i>Works cooperatively.</i>	<i>Provides a limited range of customer/client services.</i>
<b>0</b>	has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.	Has not completed defined outcomes.		Tools, materials and/or processes are used inappropriately.			

## ASSESSMENT FRAMEWORK: ISSUE ANALYSIS

CTSISS

INTRODUCTORY	INTERMEDIATE	ADVANCED
<p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li>accurately describes an issue on which people disagree</li> <li>poses an important question regarding the issue</li> <li>accesses basic in-school/community information sources regarding the issue</li> <li>uses one or more information-gathering techniques</li> </ul> <p><b>Analyzing Perspectives</b></p> <ul style="list-style-type: none"> <li>clarifies different points of view regarding the issue; <i>e.g., social, economic, environmental</i></li> <li>states a position on the issue and logical reasons for adopting that position</li> <li>states an opposing position on the issue and logical reasons for adopting that position</li> <li>identifies sources of conflict among different positions</li> <li>distinguishes between fact and fiction/opinion/theory</li> </ul> <p><b>Collaboration and Teamwork</b></p> <ul style="list-style-type: none"> <li>shares work appropriately among group members</li> <li>respects the views of others</li> </ul> <p><b>Evaluating Choices/Making Decisions</b></p> <ul style="list-style-type: none"> <li>identifies useful alternatives regarding the issue</li> <li>establishes criteria for assessing each alternative; <i>e.g., social, economic, environmental</i></li> <li>selects an appropriate alternative based on established criteria</li> <li>reflects on strengths/weaknesses of decisions by considering consequences</li> <li>communicates information in a logical sequence to justify choices/decisions made</li> </ul>	<p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li>accurately describes an issue on which people disagree, explaining areas of disagreement</li> <li>poses one or more thoughtful questions regarding the issue</li> <li>accesses a range of relevant in-school/community resources</li> <li>uses a range of information-gathering techniques</li> </ul> <p><b>Analyzing Perspectives</b></p> <ul style="list-style-type: none"> <li>categorizes different points of view regarding the issue; <i>e.g., cultural, ethical, economic, environmental, health-related</i></li> <li>states a position on the issue and logical reasons for adopting that position</li> <li>states two or more opposing positions on the issue and logical reasons for adopting each position</li> <li>describes interrelationships among different perspectives/points of view</li> <li>determines accuracy/currency/reliability of information and ideas</li> </ul> <p><b>Collaboration and Teamwork</b></p> <ul style="list-style-type: none"> <li>shares work appropriately among group members</li> <li>respects and considers the views of others</li> <li>negotiates solutions to problems</li> </ul> <p><b>Evaluating Choices/Making Decisions</b></p> <ul style="list-style-type: none"> <li>identifies important and appropriate alternatives regarding the issue</li> <li>establishes knowledge- and value-based criteria for assessing each alternative; <i>e.g., social, economic, environmental</i></li> <li>selects an appropriate alternative by showing differences among choices</li> <li>assesses strengths/weaknesses of decisions by considering consequences</li> <li>communicates ideas in a logical sequence with supporting detail to justify choices/decisions made</li> </ul>	<p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li>accurately describes an issue on which people disagree, explaining specific causes of disagreement</li> <li>poses thoughtful questions regarding the issue</li> <li>accesses a range of relevant information sources and recognizes when additional information is required</li> <li>demonstrates resourcefulness in collecting data</li> </ul> <p><b>Analyzing Perspectives</b></p> <ul style="list-style-type: none"> <li>categorizes different points of view regarding the issue; <i>e.g., cultural, ethical, economic, environmental, health-related, scientific, political</i></li> <li>states a position on the issue and insightful reasons for adopting that position</li> <li>states three or more opposing positions on the issue and thoughtful reasons for adopting each position</li> <li>analyzes interrelationships among different perspectives/points of view</li> <li>recognizes underlying bias/assumptions/values in information and ideas</li> </ul> <p><b>Collaboration and Teamwork</b></p> <ul style="list-style-type: none"> <li>shares work appropriately among group members</li> <li>respects and considers the views of others</li> <li>negotiates with sensitivity solutions to problems</li> </ul> <p><b>Evaluating Choices/Making Decisions</b></p> <ul style="list-style-type: none"> <li>describes in detail important and appropriate alternatives regarding the issue</li> <li>establishes knowledge- and value-based criteria for assessing each alternative; <i>e.g., social, economic, environmental</i></li> <li>selects an appropriate and useful alternative by showing differences among choices</li> <li>assesses strengths/weaknesses of decisions by considering consequences and implications</li> <li>communicates thoughts/feelings/ideas clearly to justify choices/decisions made</li> </ul>



# ASSESSMENT FRAMEWORK: LAB INVESTIGATIONS

CTSLAB

INTRODUCTORY	INTERMEDIATE	ADVANCED
<p><i>The student:</i></p> <p><b>Management</b></p> <ul style="list-style-type: none"> <li>• prepares self for task</li> <li>• organizes and works in an orderly manner</li> <li>• carries out instructions accurately</li> <li>• uses time effectively</li> </ul> <p><b>Teamwork</b></p> <ul style="list-style-type: none"> <li>• cooperates with group members</li> <li>• shares work appropriately among group members</li> </ul> <p><b>Equipment and Materials</b></p> <ul style="list-style-type: none"> <li>• selects and uses appropriate equipment/materials</li> <li>• follows safe procedures/techniques</li> <li>• weighs and measures accurately</li> <li>• returns clean equipment/materials to storage areas</li> </ul> <p><b>Investigative Techniques</b></p> <ul style="list-style-type: none"> <li>• gathers and applies information from at least one source</li> <li>• makes predictions that can be tested</li> <li>• sets up and conducts experiments to test a prediction</li> <li>• distinguishes between manipulated/responding variables</li> <li>• obtains results that can be used to determine if some aspect of the prediction is accurate</li> <li>• summarizes important experimental outcomes</li> </ul>	<p><i>The student:</i></p> <p><b>Management</b></p> <ul style="list-style-type: none"> <li>• prepares self for task</li> <li>• organizes and works in an orderly manner</li> <li>• interprets and carries out instructions accurately</li> <li>• plans and uses time effectively</li> <li>• adheres to routine procedures</li> </ul> <p><b>Teamwork</b></p> <ul style="list-style-type: none"> <li>• cooperates with group members</li> <li>• shares work appropriately among group members</li> <li>• negotiates solutions to problems</li> </ul> <p><b>Equipment and Materials</b></p> <ul style="list-style-type: none"> <li>• selects and uses appropriate equipment/materials</li> <li>• models safe procedures/techniques</li> <li>• weighs and measures accurately</li> <li>• practises proper sanitation procedures</li> <li>• minimizes waste of materials</li> <li>• advises of potential hazards and necessary repairs</li> </ul> <p><b>Investigative Techniques</b></p> <ul style="list-style-type: none"> <li>• gathers and applies information from a variety of sources</li> <li>• makes predictions that can be tested</li> <li>• plans, sets up and conducts experiments to test a prediction</li> <li>• identifies and explains manipulated/responding variables</li> <li>• obtains accurate results that confirm/reject the prediction</li> <li>• summarizes and applies experimental outcomes</li> </ul>	<p><i>The student:</i></p> <p><b>Management</b></p> <ul style="list-style-type: none"> <li>• prepares self for task</li> <li>• organizes and works in an orderly manner</li> <li>• interprets and carries out instructions accurately</li> <li>• plans and uses time effectively in a logical sequence</li> <li>• displays leadership in adhering to routine procedures</li> <li>• attempts to solve problems prior to requesting help</li> </ul> <p><b>Teamwork</b></p> <ul style="list-style-type: none"> <li>• cooperates with group members</li> <li>• shares work appropriately among group members</li> <li>• negotiates with sensitivity solutions to problems</li> <li>• displays effective communication skills</li> </ul> <p><b>Equipment and Materials</b></p> <ul style="list-style-type: none"> <li>• selects and uses equipment/materials independently</li> <li>• demonstrates concern for safe procedures/techniques</li> <li>• weighs and measures accurately and efficiently</li> <li>• practises proper sanitation procedures</li> <li>• minimizes waste of materials</li> <li>• anticipates potential hazards and emergency response</li> </ul> <p><b>Investigative Techniques</b></p> <ul style="list-style-type: none"> <li>• uses relevant information to explain observations</li> <li>• makes predictions that can be tested</li> <li>• plans, sets up and conducts experiments to test a prediction</li> <li>• analyzes relationships among manipulated/responding variables</li> <li>• obtains accurate results that confirm/reject prediction and answer related questions</li> <li>• summarizes, applies and evaluates experimental outcomes</li> </ul>

## ASSESSMENT FRAMEWORK: NEGOTIATION AND DEBATE

CTSNEG

INTRODUCTORY	INTERMEDIATE	ADVANCED
<p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li>• accurately describes an issue on which people disagree</li> <li>• poses an important question regarding the issue</li> <li>• accesses basic in-school/community information sources regarding the issue</li> <li>• uses one or more information-gathering techniques</li> </ul> <p><b>Analyzing Perspectives</b></p> <ul style="list-style-type: none"> <li>• states a position on the issue and logical reasons for adopting that position</li> <li>• explains why the issue is important by presenting examples of possible consequences</li> <li>• clarifies different points of view regarding the issue; <i>e.g., social, economic, environmental</i></li> <li>• distinguishes between fact and fiction/opinion/theory</li> </ul> <p><b>Collaboration and Teamwork</b></p> <ul style="list-style-type: none"> <li>• works with a range of peer members</li> <li>• shares information/opinions/suggestions through group discussion</li> <li>• listens to and respects the views of others</li> </ul> <p><b>Negotiating and Debating</b></p> <ul style="list-style-type: none"> <li>• presents a convincing argument in logical sequence supporting a position adopted on the issue</li> <li>• provides a relevant response to opposing arguments</li> <li>• speaks clearly so the argument can be understood</li> <li>• establishes a shared understanding of key alternatives and consequences relevant to the issue</li> </ul>	<p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li>• accurately describes an issue on which people disagree, explaining areas of disagreement</li> <li>• poses one or more thoughtful questions regarding the issue</li> <li>• accesses a range of relevant in-school/community resources</li> <li>• uses a range of information-gathering techniques</li> </ul> <p><b>Analyzing Perspectives</b></p> <ul style="list-style-type: none"> <li>• states a position on the issue and logical reasons for adopting that position</li> <li>• explains why the issue is important by presenting examples of possible consequences</li> <li>• categorizes different points of view regarding the issue; <i>e.g., cultural, ethical, economic, environmental, health-related</i></li> <li>• determines accuracy/currency/reliability of information and ideas</li> </ul> <p><b>Collaboration and Teamwork</b></p> <ul style="list-style-type: none"> <li>• works with a range of peer members</li> <li>• shares information/opinions/suggestions, maintaining a balance between speaking and listening</li> <li>• listens to and respects the views of others, requesting clarification as necessary from other group members</li> </ul> <p><b>Negotiating and Debating</b></p> <ul style="list-style-type: none"> <li>• presents a convincing argument in logical sequence supporting a position adopted, conveying points in order of importance</li> <li>• provides a relevant and convincing response to opposing arguments</li> <li>• speaks clearly without hesitation so the argument can be understood</li> <li>• negotiates a shared agreement on preferred alternatives relevant to the issue</li> </ul>	<p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li>• accurately describes an issue on which people disagree, explaining specific causes of disagreement</li> <li>• poses thoughtful questions regarding the issue</li> <li>• accesses a range of relevant information sources and recognizes when additional information is required</li> <li>• demonstrates resourcefulness in collecting data</li> </ul> <p><b>Analyzing Perspectives</b></p> <ul style="list-style-type: none"> <li>• states a position on the issue and insightful reasons for adopting that position</li> <li>• explains why the issue is important by presenting examples of possible consequences and implications</li> <li>• categorizes different points of view regarding the issue; <i>e.g., cultural, ethical, economic, environmental, health-related, scientific, political</i></li> <li>• recognizes underlying bias/assumptions/values in information and ideas</li> </ul> <p><b>Collaboration and Teamwork</b></p> <ul style="list-style-type: none"> <li>• works with a wide range of peer members</li> <li>• shares information/opinions/suggestions, maintaining a balance between speaking and listening</li> <li>• listens to and respects the views of others, requesting clarification as necessary from other group members</li> </ul> <p><b>Negotiating and Debating</b></p> <ul style="list-style-type: none"> <li>• presents a convincing argument in logical sequence supporting a position adopted, conveying points in order of importance and backing each with sound evidence</li> <li>• provides a relevant and convincing rebuttal to opposing arguments</li> <li>• speaks clearly without hesitation so the argument can be understood by all listeners</li> <li>• negotiates a shared agreement on preferred alternatives by resolving divergent points of view</li> </ul>

## ASSESSMENT FRAMEWORK: PRESENTATIONS/REPORTS

CTSPRE

INTRODUCTORY	INTERMEDIATE	ADVANCED
<p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li>• sets goals and follows instructions accurately</li> <li>• responds to directed questions and follows necessary steps to find answers</li> <li>• accesses basic in-school/community information sources</li> <li>• interprets and organizes information into a logical sequence</li> <li>• records information accurately, using correct technical terms</li> <li>• uses time effectively</li> </ul> <p><b>Presentation</b></p> <ul style="list-style-type: none"> <li>• demonstrates effective use of at least one medium of communication: <i>e.g., <u>Written:</u> spelling, punctuation, grammar, basic format</i></li> <li><i>Oral:</i> voice projection, body language</li> <li><i>Audio-Visual:</i> techniques, tools</li> <li>• uses correct grammatical convention and technical terms through proofreading/editing</li> <li>• provides an introduction that describes the purpose of the project</li> <li>• communicates information in a logical sequence</li> <li>• states a conclusion based on a summary of facts</li> <li>• provides a reference list of three or more basic information sources</li> </ul>	<p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li>• sets goals and describes steps to achieve them</li> <li>• uses personal initiative to formulate questions and find answers</li> <li>• accesses a range of relevant in-school/community resources</li> <li>• interprets, organizes and combines information into a logical sequence</li> <li>• records information accurately with appropriate supporting detail and using correct technical terms</li> <li>• plans and uses time effectively</li> <li>• gathers and responds to feedback regarding approach to task and project status</li> </ul> <p><b>Presentation</b></p> <ul style="list-style-type: none"> <li>• demonstrates effective use of at least two communication media: <i>e.g., <u>Written:</u> spelling, punctuation, grammar, format (formal/informal)</i></li> <li><i>Oral:</i> voice projection, body language, appearance</li> <li><i>Audio-Visual:</i> techniques, tools, clarity</li> <li>• maintains acceptable grammatical and technical standards through proofreading and editing</li> <li>• provides an introduction that describes the purpose and scope of the project</li> <li>• communicates ideas into a logical sequence with sufficient supporting detail</li> <li>• states a conclusion by synthesizing the information gathered</li> <li>• provides a reference list that includes five or more relevant information sources</li> </ul>	<p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li>• sets goals and describes steps to achieve them</li> <li>• uses personal initiative to formulate questions and find answers</li> <li>• accesses a range of relevant information sources and recognizes when additional information is required</li> <li>• interprets, organizes and combines information in creative and thoughtful ways</li> <li>• records information accurately, using appropriate technical terms and supporting detail</li> <li>• plans and uses time effectively, prioritizing tasks on a consistent basis</li> <li>• assesses and refines approach to task and project status based on feedback and reflection</li> </ul> <p><b>Presentation</b></p> <ul style="list-style-type: none"> <li>• demonstrates effective use of a variety of communication media: <i>e.g., <u>Written:</u> spelling, punctuation, grammar, format (formal/informal, technical/literary)</i></li> <li><i>Oral:</i> voice projection, body language, appearance, enthusiasm, evidence of prior practice</li> <li><i>Audio-Visual:</i> techniques, tools, clarity, speed and pacing</li> <li>• maintains acceptable grammatical and technical standards through proofreading and editing</li> <li>• provides an introduction that describes the purpose and scope of the project</li> <li>• communicates thoughts/feelings/ideas clearly to justify or challenge a position</li> <li>• states a conclusion by analyzing and synthesizing the information gathered</li> <li>• gives evidence of adequate research through a reference list including seven or more relevant information sources</li> </ul>



## ASSESSMENT FRAMEWORK: RESEARCH PROCESS

CTSRES

INTRODUCTORY	INTERMEDIATE	ADVANCED
<p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li>• sets goals and follows instructions accurately</li> <li>• adheres to established timelines</li> <li>• responds to directed questions and follows necessary steps to find answers</li> <li>• uses time effectively</li> </ul> <p><b>Information Gathering and Processing</b></p> <ul style="list-style-type: none"> <li>• accesses basic in-school/community information sources</li> <li>• uses one or more information-gathering techniques</li> <li>• interprets and organizes information in a logical sequence</li> <li>• records information accurately, using correct technical terms</li> <li>• distinguishes between fact and fiction/opinion/theory</li> <li>• responds to feedback when current approach is not working</li> </ul> <p><b>Collaboration and Teamwork</b></p> <ul style="list-style-type: none"> <li>• cooperates with group members</li> <li>• shares work appropriately among group members</li> </ul> <p><b>Information Sharing</b></p> <ul style="list-style-type: none"> <li>• demonstrates effective use of one or more communication media; <i>e.g., written, oral, audio-visual</i></li> <li>• communicates information in a logical sequence</li> <li>• uses correct grammatical convention and technical terms</li> <li>• cites three or more basic information sources</li> </ul>	<p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li>• sets goals and establishes steps to achieve them</li> <li>• creates and adheres to useful timelines</li> <li>• uses personal initiative to formulate questions and find answers</li> <li>• plans and uses time effectively</li> </ul> <p><b>Information Gathering and Processing</b></p> <ul style="list-style-type: none"> <li>• accesses a range of relevant in-school/community resources</li> <li>• uses a range of information-gathering techniques</li> <li>• interprets, organizes and combines information into a logical sequence</li> <li>• records information accurately with appropriate supporting detail and using correct technical terms</li> <li>• determines accuracy/currency/reliability of information sources</li> <li>• gathers and responds to feedback regarding approach to the task</li> </ul> <p><b>Collaboration and Teamwork</b></p> <ul style="list-style-type: none"> <li>• cooperates with group members</li> <li>• shares work appropriately among group members</li> <li>• negotiates solutions to problems</li> </ul> <p><b>Information Sharing</b></p> <ul style="list-style-type: none"> <li>• demonstrates effective use of two or more communication media; <i>e.g., written, oral, audio-visual</i></li> <li>• communicates ideas in a logical sequence with sufficient supporting detail</li> <li>• maintains acceptable grammatical and technical standards</li> <li>• cites five or more relevant information sources</li> </ul>	<p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li>• sets clear goals and establishes steps to achieve them</li> <li>• creates and adheres to detailed timelines</li> <li>• uses personal initiative to formulate questions and find answers</li> <li>• plans and uses time effectively, prioritizing tasks on a consistent basis</li> </ul> <p><b>Information Gathering and Processing</b></p> <ul style="list-style-type: none"> <li>• accesses a range of relevant information sources and recognizes when additional information is required</li> <li>• demonstrates resourcefulness in collecting data</li> <li>• interprets, organizes and combines information in creative and thoughtful ways</li> <li>• records information accurately with appropriate supporting detail and using correct technical terms</li> <li>• recognizes underlying bias/assumptions/values in information sources</li> <li>• assesses and refines approach to the task and project status based on feedback and reflection</li> </ul> <p><b>Collaboration and Teamwork</b></p> <ul style="list-style-type: none"> <li>• cooperates with group members</li> <li>• shares work appropriately among group members</li> <li>• negotiates with sensitivity solutions to problems</li> <li>• displays effective communication and leadership skills</li> </ul> <p><b>Information Sharing</b></p> <ul style="list-style-type: none"> <li>• demonstrates effective use of a variety of communication media; <i>e.g., written, oral, audio-visual</i></li> <li>• communicates thoughts/feelings/ideas clearly to justify or challenge a position</li> <li>• maintains acceptable grammatical and technical standards</li> <li>• gives evidence of adequate information gathering by citing seven or more relevant information sources</li> </ul>

**PRESENTATIONS/REPORTS: Introductory Level**

**WLDPRE-1**

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0
Content	4	3	2	1	0
Presenting/Reporting	4	3	2	1	0
	4	3	2	1	0

**STANDARD IS 1 IN EACH APPLICABLE TASK**

**Rating Scale**

*The student:*

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

**TASK CHECKLIST**

*The student:*

**Preparation and Planning**

- ☐ sets goals and follows instruction accurately
- ☐ responds to directed questions and follows necessary steps to find answers
- ☐ accesses basic in-school/community information sources
- ☐ interprets and organizes information into a logical sequence
- ☐ records information accurately using correct technical terms
- ☐ uses time effectively

**Content**

**Presenting/Reporting**

- ☐ demonstrates effective use of one or more communication media:  
*e.g., Written: spelling, punctuation, grammar, basic format*  
*Oral: voice projection, body language*  
*Audio-Visual: techniques, tools*
- ☐ uses correct grammatical convention and technical terms through proofreading/editing
- ☐ provides an introduction that describes the purpose of the project
- ☐ communicates information in a logical sequence
- ☐ states a conclusion based on a summary of facts
- ☐ provides a reference list of three or more basic information sources

**Content (continued)**

**REFLECTIONS/COMMENTS:**

**PRESENTATIONS/REPORTS: Intermediate Level**

**WLDPRE-2**

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0
Content	4	3	2	1	0
Presenting/Reporting	4	3	2	1	0
	N/A				

**STANDARD IS 2 IN EACH APPLICABLE TASK**

**Rating Scale**

*The student:*

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

**TASK CHECKLIST**

*The student:*

**Preparation and Planning**

- ☐ sets goals and describes steps to achieve them
- ☐ uses personal initiative to formulate questions and find answers
- ☐ access a range of relevant in-school/community resources

- ☐ interprets, organizes and combines information into a logical sequence
- ☐ records information accurately with appropriate supporting detail and using correct technical terms
- ☐ plans and uses time effectively
- ☐ gathers and responds to feedback regarding approach to task and project status

**Content**

- ☐ demonstrates effective use of at least two communication media:  
*e.g., Written: spelling, punctuation, grammar, format (formal/informal)*  
*Oral: voice projection, body language, appearance*  
*Audio-Visual: techniques, tools, clarity*
- ☐ maintains acceptable grammatical and technical standards through proofreading and editing
- ☐ provides an introduction that describes the purpose and scope of the project
- ☐ communicates ideas into a logical sequence with sufficient supporting detail
- ☐ states a conclusion by synthesizing the information gathered
- ☐ provides a reference list that includes five or more relevant information sources

**Content (continued)**

**Presenting/Reporting**

- ☐ demonstrates effective use of at least two communication media:  
*e.g., Written: spelling, punctuation, grammar, format (formal/informal)*  
*Oral: voice projection, body language, appearance*  
*Audio-Visual: techniques, tools, clarity*
- ☐ maintains acceptable grammatical and technical standards through proofreading and editing
- ☐ provides an introduction that describes the purpose and scope of the project
- ☐ communicates ideas into a logical sequence with sufficient supporting detail
- ☐ states a conclusion by synthesizing the information gathered
- ☐ provides a reference list that includes five or more relevant information sources

**REFLECTIONS/COMMENTS:**

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**PRESENTATIONS/REPORTS: Advanced Level****WLDAPRE-3**

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0
Content	4	3	2	1	0
Presenting/Reporting	4	3	2	1	0
	N/A				

**STANDARD IS 3 IN EACH APPLICABLE TASK****Rating Scale***The student:*

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

**TASK CHECKLIST***The student:***Preparation and Planning**

- ☐ sets goals and describes steps to achieve them
- ☐ uses personal initiative to formulate questions and find answers
- ☐ accesses a range of relevant information sources and recognizes when additional information is required
- ☐ interprets, organizes and combines information in creative and thoughtful ways
- ☐ records information accurately using appropriate technical terms and supporting detail
- ☐ plans and uses time effectively, prioritizing tasks on a consistent basis
- ☐ accesses and refines approach to task and project status based on feedback and reflection.

**Content (continued)****Presenting/Reporting**

- ☐ demonstrates effective use of a variety of communication media:  
*e.g., Written: spelling, punctuation, grammar, format (formal/informal, technical/literary)*
- ☐ Oral:  
*voice projection, body language, appearance, enthusiasm, evidence of prior practice*
- ☐ Audio-Visual: *techniques, tools, clarity, speed and pacing*
- ☐ maintains acceptable grammatical and technical standards through proofreading and editing
- ☐ provides an introduction that describes the purpose and scope of the project
- ☐ communicates thoughts/feelings/ideas clearly to justify or challenge a position
- ☐ states a conclusion by analyzing and synthesizing the information gathered
- ☐ gives evidence of adequate research through a reference list including seven or more relevant information sources

**Content****REFLECTIONS/COMMENTS:**

**CAREER SEARCH: Introductory Level****WLD CAR-1**

TASK	OBSERVATION/RATING					
Preparation and Planning	N/A	0	1	2	3	4
Information Gathering and Processing	N/A	0	1	2	3	4
Content	N/A	0	1	2	3	4
Collaboration and Teamwork	N/A	0	1	2	3	4
Information Sharing	N/A	0	1	2	3	4

**STANDARD IS 1 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**TASK CHECKLIST***The student:***Preparation and Planning**

- ☐ sets goals and follows instructions accurately
- ☐ adheres to established timelines
- ☐ responds to directed questions and follows necessary steps to find answers
- ☐ uses time effectively

**Information Gathering and Processing**

- ☐ accesses basic in-school/community information sources
- ☐ uses one or more information-gathering techniques
- ☐ interprets and organizes information into a logical sequence

- ☐ records information accurately using correct technical terms

- ☐ distinguishes between fact and fiction/opinion/theory

- ☐ responds to feedback when current approach is not working

**Content**

- ☐ describes one or more career opportunities within the field; e.g.:
  - labour-based
  - technical
  - professional

**Content (continued)**

- ☐ identifies and describes occupations relevant to one or more career opportunities; e.g.:
  - nature of the occupation
  - duties of the employee
- ☐ provides a survey of current employment statistics relevant to one or more careers; e.g.:
  - types of occupations
  - number of employees
- ☐ identifies entry requirements and training programs relevant to one or more careers; e.g.:
  - entrance requirements and competencies
  - type of training programs
- ☐ assesses current and future employment opportunities and trends; e.g.:
  - local and national needs
  - opportunities for advancement

**Collaboration and Teamwork**

- ☐ cooperates with group members
- ☐ shares work appropriately among group members

**Information Sharing**

- ☐ demonstrates effective use of one or more communication media:  
*e.g., written, oral, audio-visual*
- ☐ communicates information in a logical sequence
- ☐ uses correct grammatical/technical conventions
- ☐ cites basic information sources

**REFLECTIONS/COMMENTS:**

**CAREER SEARCH: Intermediate Level****WLD CAR-2**

TASK	OBSERVATION/RATING				
Preparation and Planning	N/A	0	1	2	3 4
Information Gathering and Processing	N/A	0	1	2	3 4
Content	N/A	0	1	2	3 4
Collaboration and Teamwork	N/A	0	1	2	3 4
Information Sharing	N/A	0	1	2	3 4

**STANDARD IS 2 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

**TASK CHECKLIST***The student:***Preparation and Planning**

- ☐ sets goals and establishes steps to achieve them
- ☐ creates and adheres to useful timelines
- ☐ uses personal initiative to formulate questions and find answers
- ☐ plans and uses time effectively

**Information Gathering and Processing**

- ☐ accesses a range of relevant in-school/community resources
- ☐ uses a range of information-gathering techniques
- ☐ interprets, organizes and combines information into a logical sequence
- ☐ records information accurately with appropriate supporting detail and using correct technical terms
- ☐ determines accuracy/currency/reliability of information sources
- ☐ gathers and responds to feedback regarding approach to the task

**Collaboration and Teamwork**

- ☐ cooperates with group members
- ☐ shares work appropriately among group members
- ☐ negotiates solutions to problems

**Information Sharing**

- ☐ demonstrates effective use of two or more communication media:  
*e.g., written, oral, audio-visual*
- ☐ communicates ideas in a logical sequence with sufficient supporting detail
- ☐ maintains acceptable grammatical and technical standards
- ☐ cites relevant information sources

**Content (continued)**

- ☐ duties of the employee
- ☐ workplace conditions
- ☐ provides a survey of current employment statistics relevant to one or more careers; e.g.:
  - types of occupations
  - number of employees
  - employment trends
- ☐ identifies entry requirements and training programs relevant to one or more careers; e.g.:
  - entrance requirements and competencies
  - type and extent of training programs
- ☐ assesses current and future employment opportunities and trends; e.g.:
  - local, national and international needs
  - opportunities for advancement and/or career change

**REFLECTIONS/COMMENTS**



**CAREER SEARCH: Advanced Level****WLDCAR-3**

TASK	OBSERVATION/RATING					
Preparation and Planning	N/A	0	1	2	3	4
Information Gathering and Processing	N/A	0	1	2	3	4
Content	N/A	0	1	2	3	4
Collaboration and Teamwork	N/A	0	1	2	3	4
Information Sharing	N/A	0	1	2	3	4

**STANDARD IS 3 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**TASK CHECKLIST***The student:***Preparation and Planning**

- ☐ sets clear goals and establishes steps to achieve them
- ☐ creates and adheres to detailed timelines
- ☐ uses personal initiative to formulate questions and find answers
- ☐ plans and uses time effectively, prioritizing tasks on a consistent basis

**Information Gathering and Processing**

- ☐ accesses a range of relevant information sources and recognizes when additional information is required
- ☐ demonstrates resourcefulness in collecting data
- ☐ interprets, organizes and combines information in creative and thoughtful ways

**Collaboration and Teamwork**

- ☐ cooperates with group members
- ☐ shares work appropriately among group members
- ☐ negotiates solutions to problems
- ☐ displays effective communication and leadership skills

**Content (continued)**

- ☐ provides a survey of current employment statistics relevant to one or more careers; e.g.:
  - types of occupations
  - number of employees
  - employment trends
- ☐ identifies entry requirements and training programs relevant to one or more careers; e.g.:
  - entrance requirements and competencies
  - type and extent of training programs
  - post-secondary institutions
- ☐ assesses current and future employment opportunities and trends; e.g.:
  - local, national and international needs
  - opportunities for advancement and/or career change
  - opportunities for self-employment and entrepreneurship

**Information Sharing**

- ☐ demonstrates effective use of a variety of communication media:
  - e.g., written, oral, audio-visual
- ☐ communicates thoughts/feelings/ideas clearly to justify or challenge a position
- ☐ maintains acceptable grammatical and technical standards
- ☐ gives evidence of adequate information gathering by citing relevant information sources

**REFLECTIONS/COMMENTS**

# NEGOTIATION AND DEBATE: Introductory Level

WLDNEG-1

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0
Analyzing Perspectives	4	3	2	1	0
Collaboration and Teamwork	4	3	2	1	0
Negotiating and Debating	4	3	2	1	0

## STANDARD IS 1 IN EACH APPLICABLE TASK

### Rating Scale

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
  - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
  - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
  - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
  - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

### TASK CHECKLIST

*The student:*

#### Preparation and Planning

- ☐ accurately describes an issue on which people disagree
- ☐ poses an important question regarding the issue
- ☐ accesses basic in-school/community information sources regarding the issue
- ☐ uses one or more information-gathering techniques

#### Analyzing Perspectives

- ☐ states a position on the issue and logical reasons for adopting that position
- ☐ explains why the issue is important by presenting examples of possible consequences
- ☐ clarifies different points of view regarding the issue: *e.g., social, economic, environmental*
- ☐ distinguishes between fact and fiction/ opinion/theory

#### Collaboration and Teamwork

- ☐ works with a range of peer members
- ☐ shares information/opinions/suggestions through group discussion
- ☐ listens to and respects the views of others

#### Negotiating and Debating

- ☐ presents a convincing argument in logical sequence supporting a position adopted on the issue
- ☐ provides a relevant response to opposing arguments
- ☐ speaks clearly so the argument can be understood
- ☐ establishes a shared understanding of key alternatives and consequences relevant to the issue

### REFLECTIONS/COMMENTS:

**NEGOTIATION AND DEBATE: Intermediate Level**

**WLDNEG-2**

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0 N/A
Analyzing Perspectives	4	3	2	1	0 N/A
Collaboration and Teamwork	4	3	2	1	0 N/A
Negotiating and Debating	4	3	2	1	0 N/A

**STANDARD IS 2 IN EACH APPLICABLE TASK**

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

**TASK CHECKLIST**

*The student:*

**Preparation and Planning**

- ☐ accurately describes an issue on which people disagree, explaining areas of disagreement
- ☐ poses one or more thoughtful questions regarding the issue
- ☐ accesses a range of relevant in-school/community resources
- ☐ uses a range of information-gathering techniques

**Analyzing Perspectives**

- ☐ states a position on the issue and logical reasons for adopting that position
- ☐ explains why the issue is important by presenting examples of possible consequences
- ☐ categorizes different points of view regarding the issue: *e.g., cultural, ethical, economic, environmental, health-related*
- ☐ determines accuracy/currency/reliability of information and ideas

**Collaboration and Teamwork**

- ☐ works with a range of peer members
- ☐ shares information/opinions/suggestions, and maintains a balance between speaking and listening
- ☐ listens to and respects the views of others, and requests clarification as necessary from other group members

**Negotiating and Debating**

- ☐ presents a convincing argument in logical sequence supporting a position adopted, conveying points in order of importance
- ☐ provides a relevant and convincing response to opposing arguments
- ☐ speaks clearly without hesitation so the argument can be understood
- ☐ negotiates a shared agreement on preferred alternatives relevant to the issue

**REFLECTIONS/COMMENTS:**



**NEGOTIATION AND DEBATE: Advanced Level**

**WLDNEG-3**

TASK	OBSERVATION/RATING			
Preparation and Planning	4	3	2	1 0 N/A
Analyzing Perspectives	4	3	2	1 0 N/A
Collaboration and Teamwork	4	3	2	1 0 N/A
Negotiating and Debating	4	3	2	1 0 N/A

**STANDARD IS 3 IN EACH APPLICABLE TASK**

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
  - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
  - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
  - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
  - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**TASK CHECKLIST**

*The student:*

**Preparation and Planning**

- ☐ accurately describes an issue on which people disagree, explaining specific causes of disagreement
- ☐ poses thoughtful questions regarding the issue
- ☐ accesses a range of relevant information sources and recognizes when additional information is required
- ☐ demonstrates resourcefulness in collecting data

**Analyzing Perspectives**

- ☐ states a position on the issue and insightful reasons for adopting that position
- ☐ explains why the issue is important by presenting examples of possible consequences and implications
- ☐ categorizes different points of view regarding the issue: *e.g., cultural, ethical, economic, environmental, health-related, scientific, political*
- ☐ recognizes underlying bias/assumptions/values in information and ideas

**Collaboration and Teamwork**

- ☐ works with a wide range of peer members
- ☐ shares information/opinions/suggestions, and maintains a balance between speaking and listening
- ☐ listens to and respects the views of others, and requests clarification as necessary from other group members

**Negotiating and Debating**

- ☐ presents a convincing argument in logical sequence supporting a position adopted, conveying points in order of importance and backing each with sound evidence
- ☐ provides a relevant and convincing rebuttal to opposing arguments
- ☐ speaks clearly without hesitation so the argument can be understood by all listeners
- ☐ negotiates a shared agreement on preferred alternatives by resolving divergent points of view

**REFLECTIONS/COMMENTS:**

**LAB ASSESSMENT: Outdoor Experiences****WDLAB**

Student Name: \_\_\_\_\_

Module(s): WLD103 WLD107 WLD108 WLD203 WLD207 WLD304

ACTIVITY/ TASK:									
DATE:									
Management	4	4	4	4	4	4	4	4	4
	3	3	3	3	3	3	3	3	3
	2	2	2	2	2	2	2	2	2
	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0
Teamwork	4	4	4	4	4	4	4	4	4
	3	3	3	3	3	3	3	3	3
	2	2	2	2	2	2	2	2	2
	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0
Equipment and Materials	4	4	4	4	4	4	4	4	4
	3	3	3	3	3	3	3	3	3
	2	2	2	2	2	2	2	2	2
	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0
Environmental Ethics	4	4	4	4	4	4	4	4	4
	3	3	3	3	3	3	3	3	3
	2	2	2	2	2	2	2	2	2
	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0
<b>TOTAL</b>									

**Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**Assessment Tools**

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**ASSESSMENT CRITERIA:***The student:***Management**

- ☐ prepares self for task
- ☐ organizes and works in an orderly manner
- ☐ interprets and carry out instructions accurately
- ☐ plans and uses time in a logical sequence
- ☐ attempts to solve problems prior to requesting help
- ☐
- ☐

**Teamwork**

- ☐ cooperates with group members
- ☐ shares tasks/tools appropriately among peers
- ☐ negotiates solutions to problems
- ☐ displays effective communication skills
- ☐
- ☐

**Equipment and Materials**

- ☐ selects appropriate equipment and materials
- ☐ handle/uses equipment and materials safely
- ☐ demonstrates concern for safe procedures/techniques
- ☐ cleans/maintains/stores equipment in a safe manner
- ☐ keeps work/study environment clean and organized
- ☐ advises of immediate hazards and necessary repairs
- ☐
- ☐

**Environmental Ethics**

- ☐ protects flora and fauna
- ☐ chooses environmentally friendly materials
- ☐ minimizes generation of waste materials
- ☐ follows accepted practices for disposing of wastes
- ☐ protects/manages water supply
- ☐

**ASSESSMENT CRITERIA: Letters of Support or Concern**

**WLDLET**

RATING	ASSESSMENT CRITERIA
4 3 2 1 0	<p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> identifies a specific issue regarding wildlife and/or habitat</li> <li><input type="checkbox"/> talks to others in order to clarify ideas</li> <li><input type="checkbox"/> accesses basic in-school/community resources regarding the issue</li> <li><input type="checkbox"/> identifies appropriate individuals/agencies to contact</li> <li><input type="checkbox"/> establishes a position on the issue</li> </ul> <p><b>Writing the Letter</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> clearly states a position on the issue and a rationale for adopting that position</li> <li><input type="checkbox"/> considers the implications of various approaches for dealing with the issue</li> <li><input type="checkbox"/> cites references to support information/views</li> <li><input type="checkbox"/> maintains an appropriate tone of communication</li> <li><input type="checkbox"/> requests a response to the letter</li> <li><input type="checkbox"/> uses correct grammatical and technical conventions</li> <li><input type="checkbox"/> demonstrates proofreading and editing skills</li> </ul>
4 3 2 1 0	<p><b>Critiquing the Response</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> identifies important elements of the response: <ul style="list-style-type: none"> <li>– acknowledgement of support or concern</li> <li>– statement of position and rationale</li> <li>– reference to supporting information/views</li> <li>– comments regarding future options/alternatives</li> </ul> </li> <li><input type="checkbox"/> assesses quality of the response based on: <ul style="list-style-type: none"> <li>– logical development of ideas</li> <li>– quality/quantity of supporting information and views</li> <li>– tone of communication</li> </ul> </li> <li><input type="checkbox"/> suggests possible improvements to the response and original letter</li> </ul>

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
  - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
  - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
  - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
  - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**REFLECTIONS/COMMENTS**



# TASK CHECKLIST FOR MAPPING

# WLDMAP

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0
Technical Components	4	3	2	1	0
Information Sharing	4	3	2	1	0
Collaboration and Teamwork	4	3	2	1	0

STANDARD IS 1 FOR INTRODUCTORY LEVEL MODULES, 2 FOR INTERMEDIATE LEVEL MODULES, AND 3 FOR ADVANCED LEVEL MODULES

## Rating Scale

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
  - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
  - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
  - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
  - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

## TASK CHECKLIST

*The student:*

### Preparation and Planning

- ☐ sets goals and follows instructions
- ☐ responds to directed questions and/or follows necessary steps to find answers
- ☐ uses time effectively
- ☐ accesses basic in-school/community information sources

- ☐ interprets and organizes information logically
- ☐ transfers and/or extrapolates data from print and visual sources to create maps
- ☐

### Technical Components

- ☐ prepares an outline of the mapped area to scale
- ☐ provides an appropriate map title
- ☐ records relevant location data
- ☐ provides a map legend that explains:
  - map symbols
  - map scale
  - organizes use of space; e.g.:
  - map size in relationship to paper size
  - use of borders
  - position of legend

### Technical Components (continued)

- ☐ demonstrated appropriate use of colour, shading and/or patterns
- ☐ produces a document free of wrinkles and smudges
- ☐ maintains appropriate technical standards through proof-reading and editing; e.g.:
  - spelling
  - legibility
- ☐

### Information Sharing

- ☐ communicates map content through oral presentation
- ☐ demonstrates ability to use map overlays in presentation
- ☐ poses questions based on information provided in map
- ☐

### Collaboration and Teamwork

- ☐ shares work appropriately among group members
- ☐ respects the views of others
- ☐ negotiates solutions to problems
- ☐

## REFLECTIONS/COMMENTS

# GUIDE TO CRITIQUING MEDIA INFORMATION

WLDMED

Student Name:	Date:
Media Source:	
Method of Presentation:	
Issue/Topic:	

## GOALS/OBJECTIVES OF THE MEDIA PRESENTATION

SUMMARY OF INFORMATION PRESENTED (e.g., topic/issue, position taken, supporting detail, implications/consequences)

QUALITY/OBJECTIVITY OF INFORMATION PRESENTED (e.g., bias-balance, currency/reliability, logic/reasoning)

PERSONAL IMPACT OF MEDIA PRESENTATION

Yes	No	ASSESSING QUALITY/OBJECTIVITY
<input type="checkbox"/>	<input type="checkbox"/>	<i>The media presentation:</i> clearly describes a topic/issue/position taken with sufficient supporting detail
<input type="checkbox"/>	<input type="checkbox"/>	demonstrates bias-balance in the manner of presentation
<input type="checkbox"/>	<input type="checkbox"/>	makes reference to different points of view (e.g., social, economic, environmental)
<input type="checkbox"/>	<input type="checkbox"/>	distinguishes between fact and fiction/opinion/theory
<input type="checkbox"/>	<input type="checkbox"/>	references current and reliable sources for information and ideas
<input type="checkbox"/>	<input type="checkbox"/>	draws valid conclusions based on analysis/synthesis of information
<input type="checkbox"/>	<input type="checkbox"/>	

## Rating Scale

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
  - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
  - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
  - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
  - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

# REFLECTION GUIDE FOR OUTDOOR EXPERIENCES

WLDREF-OUT

JOURNAL ENTRY:	#1	#2	#3	#4	#5
DATE:					
Individual/Group Preparedness	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A
Cooperation and Teamwork	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A
Responsibility and Safety	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A
Environmental Ethics	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A
TOTAL:					

## Rating Scale

The student:

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

## CRITERIA FOR REFLECTION

The student:

### Individual/Group Preparedness

- ☐ sets goals and follows instructions accurately
- ☐ adheres to established timelines
- ☐ identifies/assembles outdoor gear appropriate to the task
- ☐ uses time effectively
- ☐
- ☐

### Cooperation and Teamwork

- ☐ works with a range of peer members
- ☐ shares work appropriately among group members
- ☐ considers the ideas/suggestions of others
- ☐
- ☐

### Responsibility and Safety

- ☐ selects and uses appropriate equipment/materials
- ☐ follows safe procedures/techniques
- ☐ anticipates and advises of potential hazards
- ☐ practises proper sanitation procedures
- ☐
- ☐

### Environmental Ethics

- ☐ uses environmentally friendly materials
- ☐ picks up garbage and carries everything out that is carried in
- ☐ avoids ecologically sensitive areas
- ☐ demonstrates techniques for protecting water supply
- ☐
- ☐



## WDL0G-VOL(a)

Student Name: \_\_\_\_\_  
Module: \_\_\_\_\_  
Supervisor: \_\_\_\_\_

Volunteer Service Provided: _____ Date: _____	Volunteer Service Provided: _____ Date: _____
Volunteer Site/Location: _____	Volunteer Site/Location: _____
Time Volunteered: _____	Time Volunteered: _____
Description of Volunteer Service: _____	Description of Volunteer Service: _____
(a) goals/tasks established by supervisor _____	(a) goals/tasks established by supervisor _____
_____	_____
(b) tasks completed by volunteer: _____	(b) tasks completed by volunteer: _____
_____	_____
_____	_____
Observations/Insights Gained from Volunteer Work: _____	Observations/Insights Gained from Volunteer Work: _____
_____	_____
_____	_____
Comments: _____	Comments: _____
_____	_____
_____	_____
(Student's Signature) _____	(Student's Signature) _____
(Supervisor's Signature) _____	(Supervisor's Signature) _____
(Supervisor's Phone Number) _____	(Supervisor's Phone Number) _____

**STANDARD: The student completes all sections of the log/verification for five hours of volunteer work.**

**LOG/VERIFICATION OF VOLUNTEER WORK (PART I)****WLDLOG-VOL(b)**

<b>PREPARATION AND PLANNING</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>
<i>The student:</i>			
• identifies personal and environmental goals for volunteer work	<input type="checkbox"/>	<input type="checkbox"/>	
• prepares a list of potential environmental, industry and/or professional organizations to contact regarding volunteer work	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• contacts an organization regarding desire to volunteer, sharing personal information through interview and/or resume	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• obtains satisfactory placement for volunteer work	<input type="checkbox"/>	<input type="checkbox"/>	
• establishes a schedule of dates and times for volunteer work	<input type="checkbox"/>	<input type="checkbox"/>	
• identifies and adheres to school policies/procedures regarding off-campus activities	<input type="checkbox"/>	<input type="checkbox"/>	

**Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not Applicable

**VERIFYING AND REFLECTING**

<b>VERIFYING AND REFLECTING</b>	<b>YES</b>	<b>NO</b>	<b>N/A</b>
<i>The student:</i>			
• submits a log of tasks undertaken for each volunteer site and/or work experience (see Part II)	<input type="checkbox"/>	<input type="checkbox"/>	
• performs volunteer tasks in a satisfactory manner (see Part II)	<input type="checkbox"/>	<input type="checkbox"/>	
• provides a brief written summary of personal observations/impressions regarding the volunteer experience: <ul style="list-style-type: none"> <li>- contribution of tasks undertaken to environmental stewardship</li> <li>- problems encountered and suggested solutions</li> <li>- recommendations regarding future volunteer experiences</li> </ul>	<input type="checkbox"/>	<input type="checkbox"/>	

**REFLECTIONS / COMMENTS****LOG/VERIFICATION OF VOLUNTEER WORK (PART II)****WLDLOG-VOL(b)**

Assessment Tools

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CTS, Wildlife /G.33

(1997)

STUDENT LOG OF ACTIVITIES	VERIFICATION BY SUPERVISOR
<p><b>Student's Name:</b> _____</p> <p><b>Sponsoring Organization:</b> _____</p> <p><b>Supervisor's Name/Position:</b> _____</p> <p><b>Date(s) of Volunteer Work:</b> _____</p> <p><b>Time(s)/Duration of Volunteer Work:</b> _____</p> <p>_____</p> <p><b>Volunteer Tasks Undertaken:</b></p> <p>_____</p>	<p><i>The student:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> follows instructions and adheres to guidelines</li> <li><input type="checkbox"/> uses time effectively</li> <li><input type="checkbox"/> demonstrates concern for safe procedures and techniques</li> <li><input type="checkbox"/> anticipates and advises of potential hazards</li> <li><input type="checkbox"/> works cooperatively with other group members.</li> </ul> <p><b>Supervisor's Comments:</b></p> <p>_____</p>
<p>_____ <b>Student's Signature</b></p> <p>_____ <b>Date</b></p>	<p>_____ <b>Supervisor's Signature</b></p> <p>_____ <b>Date</b></p>



## REFLECTION GUIDE FOR ENVIRONMENTAL RESPONSIBILITY/CITIZENSHIP

WLDREF-ENV

JOURNAL ENTRY:	#1	#2	#3	#4	#5
DATE:					
Preparation and Planning	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A
Comprehension and Analysis	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A
Evaluation and Decision-Making	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A
Presenting and Reporting	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A	4 3 2 1 0 N/A
TOTAL:					

## Rating Scale

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
  - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
  - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
  - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
  - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

## REFLECTION CRITERIA

*The student:*

## Preparation and Planning

- ☐ sets goals and follow instructions accurately
- ☐ establishes a schedule of activities for completing each journal entry
- ☐ accesses in-school/community sources of information
- ☐ plans and uses time effectively

## Comprehension and Analysis

- ☐ considers the impact of one or more personal attitudes, actions and/or lifestyles on wildlife and the environment
- ☐ identifies relevant social, economic and/or environmental perspectives
- ☐ explains potential sources of conflict regarding personal attitudes, actions and/or lifestyle:  
*e.g., Who? What? Where? Why?*

## Evaluation and Decision Making

- ☐ balances information and values
- ☐ demonstrates respect for and consider the views of others
- ☐ considers alternatives for environmental citizenship on the basis of their consequences and implications for wildlife and environment
- ☐ reflects on strengths of personal actions and lifestyle within the context of environmental responsibility, and suggest areas that need improvement

## Presenting and Reporting

- ☐ uses correct grammatical convention and technical terms through proofreading/editing
- ☐ communicates information and ideas clearly in a logical sequence
- ☐ provides an introduction that describes the purpose of the journal entry
- ☐ states a conclusion based on a summary of information and ideas

**ASSESSMENT CRITERIA: Proposal for Environmental Action**

**WLDPRO**

PROPOSAL	RATIONALE	INTENDED OUTCOMES
1. Personal Action		
2. Leadership Role		

**Rating Scale**

*The student:*

- 4 demonstrates a thorough understanding of the need for action. Problems are solved independently in effective and creative ways. The rationale and outcomes are based on analysis of data and supported with sufficient detail.
- 3 demonstrates an understanding of the need for action. Issues are effectively addressed in a self-directed manner. The rationale and outcomes are based on analysis of data and supported with some detail.
- 2 demonstrates a general understanding of the need for action. Issues are addressed with guidance. The rationale and outcomes are based on limited data and detail.
- 1 demonstrates partial understanding of the need for action. Attempts a proposal but the rationale and/or outcomes are general or unsupported.
- 0 fails to understand the need for action or does not attempt a proposal.

**DIRECTIONS**

THE STUDENT PROVIDES TWO PROPOSALS FOR ENVIRONMENTAL ACTION - ONE BASED ON PERSONAL/INDIVIDUAL ACTION, THE OTHER INVOLVING A LEADERSHIP ROLE. EACH PROPOSAL TO BE SUPPORTED WITH A RATIONALE AND INTENDED OUTCOMES.

**STANDARD**

EACH PROPOSAL TO BE COMPLETED TO A STANDARD OF 1 FOR INTRODUCTORY MODULES, 2 FOR INTERMEDIATE MODULES, AND 3 FOR ADVANCED MODULES

**SAMPLE PROPOSALS: Wildlife Enhancement****WLDSAM****Sample Themes for Local Wildlife Enhancement**

Imagine that you have just been asked to develop plans for a local wildlife enhancement program in your community. Your task involves:

- proposing a plan for the enhancement program
- educating members of the community so they will want to become involved in supporting the program.

Themes you may wish to consider for your proposal in support of wildlife enhancement include:

- establishing burrowing owl habitat on abandoned farms
- creating a birdhouse trail in a local natural area
- restoring a 1 acre plot of tall prairie grass
- monitoring invertebrate life in a local pond
- creating nesting platforms for Canada geese in a wetland area
- creating upland nesting cover for waterfowl
- developing an information package on wildlife in a local area
- managing the local habitats of endangered and threatened species
- acquiring land for wildlife conservation purposes
- promoting the value of shelterbelts with private landowners
- supporting a campaign against the trading of bear gall bladders
- supporting a campaign against illegal trade in tiger bone/rhino horn
- promoting the value of old-growth forests in Canada
- creating an awareness display on wildlife for Earth Week
- creating a community/school display depicting the aesthetic value of wildlife.

**Guidelines for Developing the Enhancement Proposal**

Your first task must be to propose a plan for the enhancement program. The plan must include specific enhancement goals, a rationale for the enhancement program, and effective strategies for accomplishing the task.

Your second task involves communicating the enhancement program. This may be done through an oral presentation, by creating a brochure, through a newspaper article, or by making a videotape.

**Criteria for Assessing the Enhancement Proposal**

*The student:*

- ☐ proposes a community program designed to enhance a wildlife space and/or species
- ☐ states clear goals/objectives for the enhancement program
- ☐ provides a rationale for the enhancement program, citing relevant background information that led to its development
- ☐ identifies major strategies/actions to be employed in accomplishing enhancement goals
- ☐ identifies and explain laws, acts or formal agreements relevant to the proposal
- ☐ presents the proposal in a convincing way so as to encourage members of the community to become involved in the program
- ☐ demonstrates originality and creativity in developing and presenting the enhancement proposal.

**Rating Scale**

*The student:*

- 4 demonstrates a thorough understanding of the need for action. Problems are solved independently in effective and creative ways. The rationale and outcomes are based on analysis of data and supported with sufficient detail.
- 3 demonstrates an understanding of the need for action. Issues are effectively addressed in a self-directed manner. The rationale and outcomes are based on analysis of data and supported with some detail.
- 2 demonstrates a general understanding of the need for action. Issues are addressed with guidance. The rationale and outcomes are based on limited data and detail.
- 1 demonstrates partial understanding of the need for action. Attempts a proposal but the rationale and/or outcomes are general or unsupported.
- 0 fails to understand the need for action or does not attempt a proposal.

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## KNOWLEDGE/APPLICATION ASSESSMENT: A Definition for Wildlife

WLD1010-1

### Assessment Criteria and Conditions:

- a comprehensive definition of wildlife based on:
  - current wildlife policies established for Alberta and Canada
  - personal experience with and response to wildlife.

### Suggested Reference(s):

- *A Wildlife Policy for Canada*
- *The Status of Wildlife in Alberta*
- *Project Wild*

**STANDARD: Address six of the criteria for a definition of wildlife to a minimum standard of 1 on the rating scale**

### Rating Scale

*The student:*

- 4 meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- 3 meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using more precise terminology. Requires little or no prompting.
- 2 meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- 1 completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- 0 does not complete the task, or is unable to provide a suitable response.

N/A Not applicable

<p><b>Guiding Principles for a Definition of Wildlife*</b></p> <p>The following principles may be used as an outline to guide research for a definition of wildlife.</p> <ul style="list-style-type: none"> <li>• Wildlife is an integral part of the environment in which Canadians live and a key indicator of the health of that environment.</li> <li>• Wildlife has intrinsic, social, cultural and economic values.</li> <li>• Wildlife is a major source of food and a vital part of the cultures and economies of many aboriginal peoples.</li> <li>• All Canadians have stewardship responsibility for wildlife. Governments are accountable for its management. Aboriginal peoples have a special role in wildlife management and in certain regions are also accountable for it.</li> <li>• The maintenance of viable natural populations of wildlife always takes precedence over their use by people.</li> <li>• The way in which land, water and air are used strongly affects the quality and quantity of habitat upon which wildlife depends.</li> <li>• All Canadians share the costs of conserving wildlife. Those whose actions result in additional costs should bear them.</li> <li>• Basic and applied scientific research are essential to our understanding of ecosystems and their wildlife components.</li> <li>• Effective conservation of wildlife relies upon a well-informed and involved public.</li> </ul> <p>* Wildlife Ministers' Council of Canada. <i>A Wildlife Policy for Canada</i>, Canadian Wildlife Service, 1990.</p>	<p><b>Criteria for a Definition of Wildlife</b></p> <p>A comprehensive definition of wildlife should:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> incorporate a personal response to wildlife based on experience</li> <li><input type="checkbox"/> distinguish between domesticated and non-domesticated (wild) species</li> <li><input type="checkbox"/> include wild organisms <u>and</u> their habitat; e.g.:                             <ul style="list-style-type: none"> <li>– plants and animals</li> <li>– native and non-native species</li> </ul> </li> <li><input type="checkbox"/> make reference to species traditionally regarded as wildlife (e.g., fishes, amphibians, reptiles, birds and mammals), as well as to wild plants, invertebrates and micro-organisms</li> <li><input type="checkbox"/> demonstrate awareness that wildlife is an integral part of the environment</li> <li><input type="checkbox"/> cite instances where wildlife has intrinsic social, cultural and economic value</li> <li><input type="checkbox"/> relate symbols of wildlife to our culture</li> <li><input type="checkbox"/> identify one or more situations where there are differing opinions regarding whether a species is considered wildlife for not</li> </ul>
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**SAMPLE FOOD CHAIN SCENARIO**

WLD1010-2

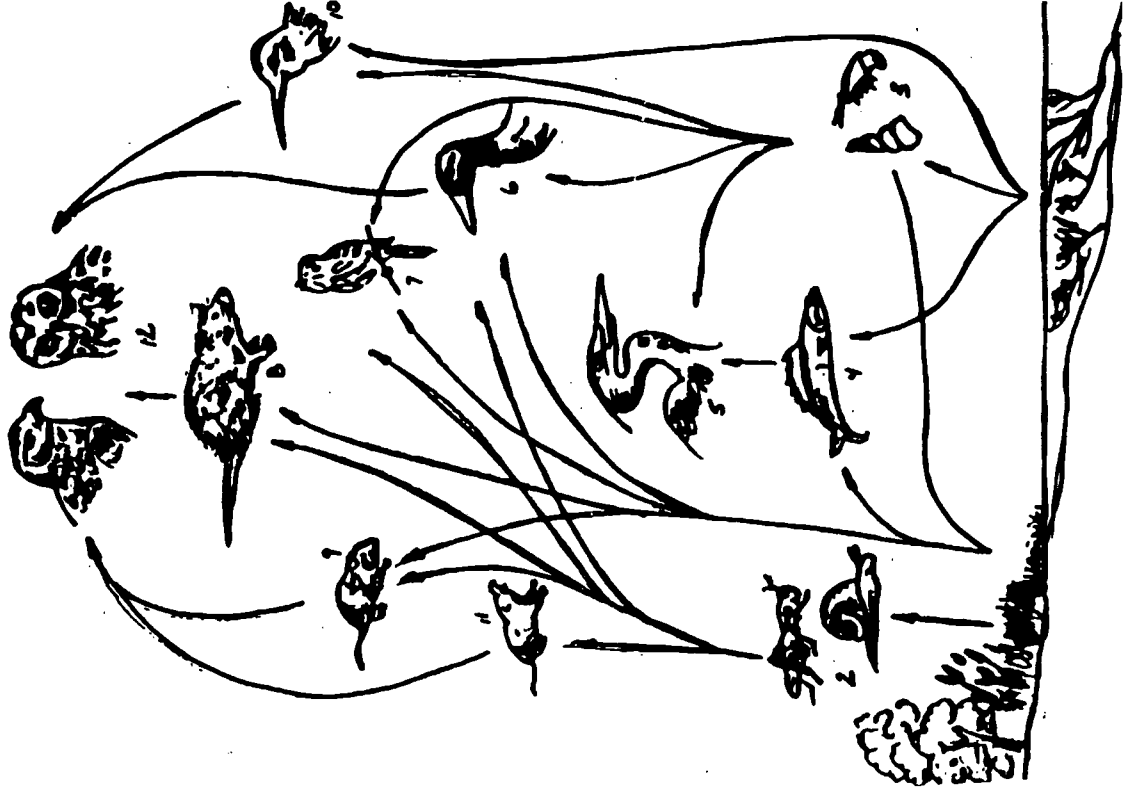
Here is an example of a food web in a slough near Vermilion, Alberta.

Producer organisms are the land and water plants growing in and around the slough itself (1). The plants are then eaten by grasshoppers and snails (2), and the aquatic invertebrates (3). Fish, represented by seven or nine spined sticklebacks (4) feed on the vegetative matter from both aquatic and terrestrial ecosystems. The fish are consumed by first-level carnivores, represented by the great blue heron (5). The sandpiper and mallard duck (6), song sparrows (7), muskrats (8), field mouse (9) and the western sandpiper (10) each feed on plants and animals. The shrew is a first-level carnivore (11). The top carnivores (second level) are the marsh hawk and the short-eared owl.

Describe what the effects might be if the song sparrows disappeared from the web.

**Sample Questions/Activities:**

1. Add micro-organisms to the food web.
2. List abiotic/biotic factors.
3. Identify environmental factors that would affect this food web.
4. List producers, consumers and decomposers.



# KNOWLEDGE/APPLICATION ASSESSMENT: Limiting Factors for Wildlife Populations

WLD1010-3

## Assessment Criteria and Conditions:

- identifying and explaining six limiting factors and their affects on wildlife populations.

## Suggested Reference(s):

- Ecosystems*
- The Nature of Canada: A Primer on Spaces and Species*
- Project Wild*

**STANDARD:** Respond to a standard of 1 on the rating scale

## Rating Scale

*The student:*

- meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.

- meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.

- meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.

- completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.

- does not complete the task, or is unable to provide a suitable response.

N/A Not applicable

Background Information	Sample Questions/Activities										
<p><b>Limiting factors</b> are the <u>essential</u> substances required for growth. Examples of limiting factors are food, water, shelter, space, temperature and appropriate habitat. When a factor is lacking, this factor often limits a population size. For example, food is usually the most important limiting factor for animal populations.</p> <p>Limiting factors can be both biotic and abiotic and are continually changing. For example, a climatic change may result in a greater-than-normal production of the vegetation that supports a deer mouse population, causing the mouse population to increase. A return to normal vegetation would lower the number of mice that could be supported. Less food available means fewer mice.</p> <p>Wildlife populations fluctuate naturally around a level, which is called the <b>carrying capacity</b>. Carrying capacity means the number of living things any area or environment can support at any one time. In the example with mice, when the vegetation was increased the carrying capacity increased.</p> <p>Some examples of limiting factors for wildlife populations include:</p> <table><tr><td>food</td><td>shelter</td></tr><tr><td>predation</td><td>space or habitat</td></tr><tr><td>disease</td><td>low productive rate</td></tr><tr><td>climate</td><td>species competition</td></tr><tr><td>human intervention</td><td></td></tr></table>	food	shelter	predation	space or habitat	disease	low productive rate	climate	species competition	human intervention		<ol style="list-style-type: none"><li>Use the preceding examples to identify limiting factors that affect wildlife populations in each of the following situations:<ol style="list-style-type: none"><li>Salmon, a major food item of some grizzly bear populations in the spring and summer, are decreasing. It is believed their decrease is caused by the contamination of salmon spawning areas by pulp mills.</li><li>The peregrine falcon population is endangered because of the use of DDT, a pesticide used in the past. DDT causes the eggshells of the falcon to become extremely weak.</li><li>Humans like to put up nest boxes for birds.</li><li>Owing to the rapid increase in the deer population of an area, there is an increase of starvation and predation.</li><li>A decrease in the number of wolves by a predator control program causes an increase in the local moose population.</li></ol></li><li>Define carrying capacity and limiting factor in your own words.</li><li>Choose a specific animal or plant. Describe three factors that may limit its population size.</li><li>Describe three ways a farmer or rancher could increase the carrying capacity of an area.</li><li>Describe three ways a farmer or rancher could decrease the carrying capacity of an area.</li></ol>
food	shelter										
predation	space or habitat										
disease	low productive rate										
climate	species competition										
human intervention											



**LAB OR FIELD INVESTIGATION: Limiting Factors for Wildlife Populations****WLD1010-4**

TASK	OBSERVATION/RATING					
Management	4	2	3	1	0	N/A
Teamwork	4	3	2	1	0	N/A
Equipment and Materials	4	3	2	1	0	N/A
Investigative Techniques	4	3	2	1	0	N/A

**STANDARD IS 1 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

**TASK CHECKLIST***The student:***Management**

- ☐ prepares self for task
- ☐ organizes and works in an orderly manner
- ☐ carries out instructions accurately
- ☐ uses time effectively

**Teamwork**

- ☐ cooperates with group members
- ☐ shares work appropriately among group members

**Equipment and Materials**

- ☐ selects and uses appropriate equipment/materials
- ☐ follows safe procedures/techniques
- ☐ weighs and measures accurately
- ☐ returns clean equipment/materials to storage areas

**Investigative Techniques**

- ☐ gathers and applies information from at least one source regarding a particular population and its limiting/environmental factors
- ☐ makes predictions about the effects of environmental changes that can be tested
- ☐ considers and establishes ethical guidelines for the investigation of wildlife
- ☐ sets up and conducts experiments to test a prediction
- ☐ distinguishes between changing (environmental) variables and responding (population) variables
- ☐ obtains results that can be used to determine if some aspect of the prediction is accurate
- ☐ summarizes important experimental outcomes regarding the effects of environmental factors on a population

**REFLECTIONS/COMMENTS****Sample Lab Investigations:**

- fruitfly/mosquito populations
- planted seedlings
- tropisms (e.g., meal worms)

**Sample Field Investigations:**

- sampling aquatic invertebrate
- criteria for release/relocation sites (e.g., pheasants, foxes)
- create a birdhouse trail

**RESOURCES:**

*Aquatic Invertebrate Monitoring Program, FEESA  
Ecosystems, LRDC  
Ecosystems, Calgary Board of Education  
Project Wild, Alberta Environmental Protection*

**Assessment Tools**

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**SAMPLE ASSESSMENT ITEMS: Ecosystem Concepts****WLD1010-5**

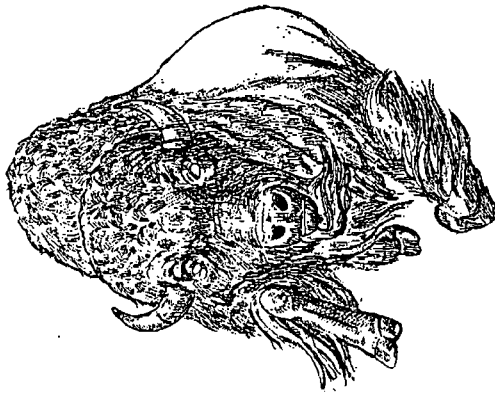
Column A consists of 16 definitions that can be matched with the terms in column B. Choose the capital letter of the appropriate term in the parenthesis in column A. Each term can only be used once.

**Column A**

- ( ) 1. a community of living organisms and their local physical environment
- ( ) 2. an organism that feeds on the tissue of animals
- ( ) 3. a distinctive combination of plants and animals in a climax community
- ( ) 4. the study of ecosystems
- ( ) 5. a collection of populations of different species within a specific area
- ( ) 6. the process where a new species is born
- ( ) 7. a species whose progress is monitored as an indication of what is happening to an ecosystem or the environment as a whole
- ( ) 8. a group of organisms capable of producing fertile offspring or a group that has similarities in anatomy
- ( ) 9. the Earth's thin veil that contains and supports life
- ( ) 10. a species dies out for a number of reasons
- ( ) 11. genetic variation in a species that allows some individuals a greater chance of surviving
- ( ) 12. a transition zone between two structurally different communities
- ( ) 13. an organism that feeds on either vegetative or animal matter for sustenance
- ( ) 14. an organism that feeds on vegetative matter
- ( ) 15. interbreeding members of one species living in a specific area
- ( ) 16. a representative species dies out in a certain location but can be found in other areas.

**Column B**

- |                      |                      |
|----------------------|----------------------|
| A. extinction        | J. community         |
| B. natural selection | K. omnivores         |
| C. autotroph         | L. speciation        |
| D. detritivores      | M. ecosystem         |
| E. population        | N. ecotone           |
| F. extirpation       | O. biome             |
| G. species           | P. ecology           |
| H. biosphere         | Q. carnivores        |
| I. herbivores        | R. indicator species |



**SAMPLE INTERVIEW PROJECT: Conservation and Preservation****WLD1010-6**

The meanings of the terms conservation and preservation are often not clearly understood. The purpose of this assignment is to explore the meaning of these terms.

In this project you will:

- reflect upon what conservation and preservation mean to you now
- research the meaning of conservation and preservation as they relate to wildlife
- conduct interviews with three or more people regarding their views on wildlife conservation and preservation.
- present the results of interviews to the class, discussing similarities and differences between the terms, and misconceptions commonly held regarding the terms.

**What do the terms conservation and preservation mean?**

There are two functions of wildlife management—conservation and preservation. They are what biologists, park wardens, naturalists, agriculturists and farmers do. Wildlife management encompasses the application of knowledge and technical skills to protect, preserve, conserve, limit, enhance or extend the value of wildlife and its habitat.

The major objective of conservation is to USE “safe” wildlife populations wisely for the benefit of man. “Safe” refers to healthy plant and animal populations that are not threatened or endangered. “Wise use” means to use in such a manner as natural ecological processes are not disrupted.

The major objective of preservation is to PROTECT “unsafe” wildlife populations FROM HARM so as to make them “safe.” “Unsafe” refers to unhealthy populations that are threatened or endangered. When this objective has been achieved, the population would move to the realm of conservation.



**Sample Interview Questions:** (It is important to note that there are no right or wrong answers.)

- ☐ What do the terms wildlife conservation and wildlife preservation mean?
- ☐ What is the difference between the terms?
- ☐ Can you provide an actual example of wildlife conservation? wildlife preservation?
- ☐ What do you believe to be the most critical problem facing wildlife today?
- ☐ Can you give one example of an endangered species in Canada?
- ☐ Do you know why this species is endangered?
- ☐ Can you give one example of an endangered or threatened habitat in the world?
- ☐ Do you know why this habitat is endangered or threatened?
- ☐ How do people try to “save” endangered species?
- ☐ Do you consider humans more important than other wildlife species? Why or why not?
- ☐ What is the difference between hunting and poaching?
- ☐ Can you name one place/habitat that has changed in your lifetime? How has it changed? How does this make you feel?
- ☐ Do you consider national parks important? Why or why not?
- ☐ Do you think we need more (or fewer) “protected spaces” in Alberta? Why or why not?
- ☐ Whose responsibility is wildlife?

**References Used**

- Project Wild Activity Guide.* 1990. Western Regional Environmental Education Council. Ottawa, Ontario.
- Thomson, R. *The Wildlife Game.* 1992. The Nyala Wildlife Publications Trust. Westville, South Africa. p. 71.

**KNOWLEDGE/APPLICATION ASSESSMENT: Diversity in Wildlife**

**WLD1020-1**

**Assessment Criteria and Conditions:**

- describing diversity among:
  - major groups of Canadian wildlife, including plants, insects, fish, amphibians, reptiles, birds and mammals
  - species within each major group of Canadian wildlife
  - the distribution and habitats of Canadian wildlife.

**Suggested Reference(s):**

- *Ecosystems*
- *The Nature of Canada: A Primer on Spaces and Species*
- *Alberta Wildlife Viewing Guide*
- *Nature Alberta: An Illustrated Guide to Common Plants and Animals*

**STANDARD: Respond to a minimum standard of 1 on the rating scale**

**Rating Scale:**

- 4 meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- 3 meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
- 2 meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- 1 completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- 0 does not complete task, or is unable to provide a suitable response.

N/A Not applicable

G.44/ Wildlife, CTS  
(1997)

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Background Information	Sample Questions/Activities
<p>See <i>The Nature of Canada: A Primer on Spaces and Species</i>, Chapter 2 (Wildlife):</p> <ul style="list-style-type: none"> <li>• Q20: What is "wildlife"?</li> <li>• Q21: How many species of wildlife are there on Earth?</li> <li>• Q22: How many species of wildlife do we have in Canada?</li> <li>• Q23: What is "wildlife habitat"?</li> <li>• Q24: How much space do wild species need to survive?</li> <li>• Q25: Do species tolerate changes to their habitat?</li> <li>• Q26: Can species survive destruction of their habitat?</li> </ul>	<ol style="list-style-type: none"> <li>1. Identify the distinguishing characteristics of major groups of wildlife found in Canada; e.g.:                             <ul style="list-style-type: none"> <li>• plants</li> <li>• micro-organisms</li> <li>• insects</li> <li>• fish</li> <li>• amphibians</li> <li>• reptile</li> <li>• birds</li> <li>• mammals.</li> </ul> </li> <li>2. Identify 50 or more Canadian wildlife species, including species representative of each of the major groups.</li> <li>3. Select one of the major groups of wildlife found in Canada, and compare the distribution and habitats of five species within that group.</li> <li>4. Provide a comprehensive list of wildlife species representative of each of three biomes of Canada; e.g.:                             <ul style="list-style-type: none"> <li>• arctic</li> <li>• boreal forest</li> <li>• mountain</li> <li>• grasslands</li> <li>• Canadian Shield</li> <li>• temperate deciduous forest</li> </ul> </li> </ol>



**RESEARCH PROCESS: An Alberta Wildlife Species****WLD1020-2**

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0 N/A
Information Gathering and Processing	4	3	2	1	0 N/A
Content	4	3	2	1	0 N/A
Collaboration and Teamwork	4	3	2	1	0 N/A
Information Sharing	4	3	2	1	0 N/A

**STANDARD IS 1 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**TASK CHECKLIST***The student:***Preparation and Planning**

- ☐ sets goals and follows instructions accurately
- ☐ adheres to established timelines
- ☐ responds to directed questions and follow necessary steps to find answers
- ☐ uses time effectively

**Information Gathering and Processing**

- ☐ accesses basic school/community information sources
- ☐ uses one or more information-gathering techniques
- ☐ interprets and organizes information in a logical sequence
- ☐ records information accurately using correct technical terms
- ☐ distinguishes between fact and fiction/opinion/theory
- ☐ responds to feedback when current approach is not working

**Content**

- ☐ provides a general description of the wildlife species with respect to structure, size/weight and coloration
- ☐ provides an illustration or picture of the wildlife species
- ☐ describes special characteristics/adaptations of the wildlife species; e.g.:
  - habitat/range
  - activity patterns
  - feeding habits/diet
  - hibernation/migration

**Content (continued)**

- ☐ provides a map that outlines species distribution and range
- ☐ describes species interactions; e.g.:
  - predation
  - interaction with humans
- ☐ provides information relevant to life cycle; e.g.:
  - reproductive cycle
  - mating habits
  - care of young
  - lifespan
- ☐ provides information relevant to social organization; e.g.:
  - solitary/gregarious
  - seasonal change in social structure
- ☐ describes the current status of the wildlife species and recent research conducted regarding the species

**Collaboration and Teamwork**

- ☐ cooperates with group members
- ☐ shares work appropriately among group members

**Information Sharing**

- ☐ demonstrates effective use of one or more communication media:
  - e.g., *written, oral, audio-visual*
- ☐ communicates information in a logical sequence
- ☐ uses correct grammatical convention and technical terms
- ☐ cites three or more basic information sources

**REFLECTIONS/COMMENTS:**

**PROJECT ASSESSMENT: "Design a Critter"**

**WLD1020-3**

PROJECT CHECKLIST	
Rating	<i>The student:</i>
4	<b>Planning and Research</b>
3	<input type="checkbox"/> sets goals for the project and follow instructions accurately
2	<input type="checkbox"/> accesses relevant in-school/community information sources
1	<input type="checkbox"/> records accurate information regarding an ecoregion in Alberta (e.g., temperature, climate, topography, indicator species)
0	<input type="checkbox"/> interprets and explains structural, physiological and behavioural adaptation
	<input type="checkbox"/> responds to feedback when current approach to project is not working
	<input type="checkbox"/> adheres to established timelines and use time effectively
	<input type="checkbox"/>
4	<b>Design and Technical Quality</b>
3	<input type="checkbox"/> designs a "critter" that illustrates examples of:
2	<input type="checkbox"/> - structural adaptation
1	<input type="checkbox"/> - physiological adaptation
0	<input type="checkbox"/> - behavioural adaptation
4	<input type="checkbox"/> selects appropriate equipment/materials and constructs a two- or three-dimensional model of the "critter"
	<input type="checkbox"/> demonstrates elements of originality and creativity throughout the design and construction process
	<input type="checkbox"/> maintains technical quality throughout the layout, construction and finishing phases of the project
	<input type="checkbox"/> cooperates with, and shares work appropriately among group members
	<input type="checkbox"/>
4	<b>Presentation and Critique</b>
3	<input type="checkbox"/> demonstrates effective use of at least one medium of communication (e.g., oral, written, visual)
2	<input type="checkbox"/> uses appropriate labelling techniques to identify structural, physiological and behavioural adaptations
1	<input type="checkbox"/> provides a rationale for the "critter" by relating each adaptation to environmental factors
0	<input type="checkbox"/> cites three or more relevant information sources
	<input type="checkbox"/> makes summary statements regarding the goals of the project and how they were achieved
	<input type="checkbox"/> reflects on the strengths and limitations of project outcomes, and suggests refinements to the process and/or product
	<input type="checkbox"/>

**STANDARD IS 1 IN EACH APPLICABLE TASK**

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**REFLECTIONS/COMMENTS**

# KNOWLEDGE/APPLICATION ASSESSMENT: Biodiversity

WLD1020-4

## Assessment Criteria and Conditions:

- defining biodiversity, and suggesting possible reasons for differences within and among wildlife species/spaces in Alberta as compared to those in other parts of the world.

## Suggested Reference(s):

- Ecosystems*
- The Nature of Canada: A Primer on Spaces and Species*

**STANDARD:** Respond to a minimum standard of 1 on the rating scale

## Rating Scale

*The student:*

- meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
- meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- does not complete task, or is unable to provide a suitable response.

N/A Not applicable

Background Information	Sample Questions/Activities
<p>See <i>The Nature of Canada: A Primer on Spaces and Species</i>, Chapter 2 (Biodiversity):</p> <ul style="list-style-type: none"> <li>Q35: What is "biodiversity"?</li> <li>Q36: Why is biodiversity important?</li> <li>Q37: With so many species, why should we worry if some disappear?</li> <li>Q38: Is there a link between biodiversity and cultural diversity?</li> </ul>	<ol style="list-style-type: none"> <li>Provide a definition for "biodiversity". Explain three main types of biodiversity; e.g.: <ul style="list-style-type: none"> <li>species diversity</li> <li>genetic diversity</li> <li>ecosystem diversity</li> </ul> </li> <li>Compare the diversity among living organisms in Alberta and other parts of the world; e.g.: <ul style="list-style-type: none"> <li>temperate to temperate</li> <li>temperate to tropic</li> <li>temperate to arctic</li> </ul> </li> <li>Suggest reasons for differences in diversity among living organisms in Alberta and other parts of the world; e.g.: <ul style="list-style-type: none"> <li>Earth history</li> <li>evolution</li> <li>extinction</li> <li>number of niches</li> <li>biotic and abiotic factors</li> <li>human influences</li> </ul> </li> </ol>

Assessment Tools

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### Safety Guidelines

1. For each of the following outdoor situations, clearly describe the primary hazard(s) you would expect to encounter, and the precautions you would take to avoid serious problems:
  - a) a cross-country ski day-trip in the foothills in early winter
  - b) a cross-country ski day-trip in the mountains in late spring
  - c) a three-day spring canoe trip down a Class II river section
  - d) a one-day mountain climbing trip in mid-summer
  - e) a week-long hunting trip in the northern bush in early fall
  - f) a two-day summer horseback trip in the southern grasslands.
2. You are the leader of a hiking party, on a five-day backpacking trip in the Willmore Wilderness. On the third day a member of your party has fallen and appears to be seriously injured. It's getting late in the day, but you are still about an hour away from your planned campsite for the night. Clearly explain:
  - a) the **precautions** you would have taken and the plans you would have made before the trip to prepare for such an emergency
  - b) the **immediate steps** you would take to tackle this problem
  - c) the **contingencies** you would need to consider.
3. Explain the precautions you need to take **before, during and after** an outdoor trip in western Alberta to avoid problems arising from encounters with:
  - a) black bears
  - b) grizzly bears
  - c) bees
  - d) snakes
  - e) ticks
  - f) mosquitoes.
4. You are in charge of planning for a mid-winter, two-day overnight cross-country ski trip in Kananaskis Park for a group of five experienced skiers. Prepare a complete a:
  - a) personal equipment list
  - b) group equipment list.
5. You are on a one-day hiking trip in Jasper National Park with some friends. You go off on your own to fish some "good spots" around the corner. Later you discover that you are completely lost, and now it's starting to get dark.
  - a) What should be your first priority?
  - b) What actions should you take immediately?
  - c) What should you do about food, water, shelter and animals?
  - d) What steps should you take to expedite your rescue?
6. You are one of the "friends" in question #5. What steps should you and the rest of the group take when you discover that your friend is missing?
  7. Describe the early symptoms of hypothermia.
8. What steps should be immediately taken if you suspect
  - a) a member of your party is showing signs of hypothermia?
  - b) you are beginning to suffer from hypothermia?
9. List the minimum equipment which should be included in a survival kit.



**Safety Guidelines (continued)**

10. Describe the primary exposure hazard(s) in each of the following situations:
- hiking in the "badlands" at Dinosaur Provincial Park in mid-summer
  - horseback riding in the northern bush country in early spring
  - canoeing on the North Saskatchewan River in late fall
  - mountain climbing in Banff National Park in mid-summer.
11. List four sources of "tinder" generally available in the wilderness to start a survival fire.
12. List and describe three Alberta wild plants that are poisonous, and three that are edible.

**Survival Techniques**

- After experiencing an emergency and identifying the nature of the situation, name five steps that might be taken to assure safety of your guests.
- Survival and first-aid kits must be available at all times. Describe/list five or more requirements for these kits.
- An emergency shelter may often be set up using materials and natural structures. Identify four types of shelters.
- When selecting a location for an emergency shelter, list four factors that should be considered.
- Name eight methods that may be used for signalling for help in a survival situation.

6. List eight steps in the use of a two-way radio.

7. As dehydration affects mental and physical performance, water is necessary for survival. List five methods of obtaining water in a survival situation.

8. List three means of ensuring safe supply of food.

**Ecotourism and Capacity**

- Define:
  - ecotourism
  - carrying capacity
  - minimum impact/no-trace land use
- Identify five stakeholder groups that may use the outdoor wilderness.
- Explain when carrying capacity would be at its lowest in a specific wilderness area.
- Name six factors that determine carrying capacity for a specific wilderness area.
- Some of the best wildlife habitats have "an abundance of edge" (i.e., occur in areas where two ecosystems overlap). Explain what this means and give examples.

**TASK CHECKLIST: Outdoor Experiences 1**

**WLD1030-2**

GUIDELINES FOR SAFE TRAVEL	
<i>The student:</i>	
<input type="checkbox"/>	prepares and follows a schedule for travel
<input type="checkbox"/>	informs responsible person(s) of destination, route, expected date of return and number in party
<input type="checkbox"/>	selects and prepares appropriate food and equipment for trip
<input type="checkbox"/>	uses orientation and navigation skills; e.g.: <input type="checkbox"/> interprets natural signs <input type="checkbox"/> uses compass and map
<input type="checkbox"/>	avoids dangerous situations with wildlife; e.g.: <input type="checkbox"/> monitors activities of wildlife in area <input type="checkbox"/> disposes of garbage properly <input type="checkbox"/> stores food safely <input type="checkbox"/> maintains safe distance from wildlife
<input type="checkbox"/>	prepares for weather and seasonal conditions; e.g.: <input type="checkbox"/> identifies hazards particular to the area <input type="checkbox"/> listens to weather/news forecasts <input type="checkbox"/> watches for changes in current conditions <input type="checkbox"/> dresses according to season, weather and activity <input type="checkbox"/> carries survival equipment

GUIDELINES FOR SAFE TRAVEL (continued)	
<input type="checkbox"/>	follows safe procedures for the use of tools and equipment; e.g.: <input type="checkbox"/> ensures good condition prior to use <input type="checkbox"/> demonstrates safe use/appropriate care <input type="checkbox"/> follows safe procedures for storing and carrying
<input type="checkbox"/>	follows safety guidelines for the use of fuels; e.g.: <input type="checkbox"/> adheres to legislation regarding fuel storage and use <input type="checkbox"/> filters fuel before use <input type="checkbox"/> adds fuel in ventilated area away from open flame <input type="checkbox"/> stores fuel using safe methods
<input type="checkbox"/>	conducts self-assessment of personal performance and identifies strengths and areas that need improvement
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

SETTING UP EMERGENCY SHELTER	
<i>The student:</i>	
<input type="checkbox"/>	identifies type of shelter that will best protect from the elements
<input type="checkbox"/>	selects an appropriate location for shelter, considering water, fire and signalling needs
<input type="checkbox"/>	demonstrates two or more basic shelter-building techniques that involve the use of materials and/or natural structures available in the outdoors; e.g.: <input type="checkbox"/> fallen tree shelter <input type="checkbox"/> lean-to shelter <input type="checkbox"/> snow cave shelter
<input type="checkbox"/>	demonstrates appropriate use of tools, equipment and safety devices
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

## TASK CHECKLIST: Outdoor Experiences 1 (continued)

WLD1030-2

SIGNALLING FOR HELP
<p><i>The student:</i></p> <p><input type="checkbox"/> explains applications of the international signal for help</p> <p><input type="checkbox"/> demonstrates three or more methods of sending rescue signals in the outdoors; e.g.:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> flare signals</li> <li><input type="checkbox"/> fire signals</li> <li><input type="checkbox"/> mirror signals</li> <li><input type="checkbox"/> sound signals</li> <li><input type="checkbox"/> information signals</li> </ul> <p><input type="checkbox"/> demonstrates methods for sending ground to air signals; e.g.:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> evergreen boughs</li> <li><input type="checkbox"/> tramped snow</li> <li><input type="checkbox"/> use of contrasting materials</li> </ul> <p><input type="checkbox"/></p>

MINIMUM IMPACT LAND USE (continued)
<p><input type="checkbox"/> picks up other people's garbage, and carries out everything carried into the camp site</p> <p><input type="checkbox"/> demonstrates techniques for protecting and managing natural water supply; e.g.:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> establishment of wash area</li> <li><input type="checkbox"/> disposal techniques for waste water</li> </ul> <p><input type="checkbox"/> adheres to local fire restrictions</p> <p><input type="checkbox"/> uses existing fire box/pit whenever possible, and guards against flying embers</p> <p><input type="checkbox"/> builds fire away from roots and branches, and uses driftwood or deadfall for fire fuel whenever possible.</p> <p><input type="checkbox"/> follows marked paths and avoids ecologically sensitive areas</p> <p><input type="checkbox"/> considers carrying capacity of the area, and avoids nesting/spawning areas and young animals</p> <p><input type="checkbox"/> avoids removing plants and wildflowers, and disturbing sediment in streams</p> <p><input type="checkbox"/> critically examines outdoor procedures and suggests future refinements to land use practices</p> <p><input type="checkbox"/></p>

## STANDARD IS 1 IN EACH APPLICABLE TASK AREA

## Rating Scale

The student:

- 4 Exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 Meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 Meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 Meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 Has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

## RELECTIONS/COMMENTS

## MINIMUM IMPACT LAND USE

The student:

- ☐ constructs a shelter demonstrating the least possible impact on the environment
- ☐ uses environmentally friendly materials, and limits the use/disposal of petroleum products

## KNOWLEDGE/APPLICATION ASSESSMENT: Significance of Wildlife

WLD1050-1

### Assessment Criteria and Conditions:

- identifying and explaining six or more scenarios where wildlife:
  - is important in social and cultural contexts
  - has economic value
  - is important in environmental contexts.

### Suggested Reference(s):

- *The Nature of Canada: A Primer on Spaces and Species*
- *Project Wild*
- *A Primer on Environmental Citizenship*

**STANDARD:** Respond to a minimum standard of 1 on the rating scale

### Rating Scale

*The student:*

- 4 meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- 3 meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
- 2 meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- 1 completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- 0 does not complete task, or is unable to provide a suitable response.

N/A Not applicable

Background Information	Sample Questions/Activities
<p>See <i>The Nature of Canada: A Primer on Spaces and Species</i>, Chapter 4 (The Importance of Spaces and Species):</p> <ul style="list-style-type: none"> <li>• Q56: Why should we value the natural environment?</li> <li>• Q59: How does the health of wildlife relate to our own health?</li> <li>• Q60: How do plants and animals help us stay healthy?</li> <li>• Q61: Do spaces and species contribute to our psychological and emotional health?</li> <li>• Q62: How do spaces and species contribute to our economic well-being?</li> <li>• Q63: Why does agriculture need a healthy natural environment?</li> <li>• Q64: How does forestry depend on the natural environment?</li> <li>• Q65: In what ways does tourism rely on spaces and species?</li> <li>• Q66: What is wildlife worth in dollars and cents?</li> <li>• Q67: How have spaces and species contributed to human knowledge?</li> <li>• Q69: How will the preservation of spaces and species benefit us in the future?</li> </ul>	<ol style="list-style-type: none"> <li>1. Identify and describe six or more scenarios where wildlife is important in social and/or cultural contexts; e.g.:           <ul style="list-style-type: none"> <li>• recreation</li> <li>• spiritual/aesthetic uses</li> <li>• medicine</li> <li>• use of indigenous peoples</li> <li>• mythology/astrology</li> <li>• literature/art/drama.</li> </ul> </li> <li>2. Identify and describe six or more scenarios where wildlife has economic value; e.g.:           <ul style="list-style-type: none"> <li>• subsistence</li> <li>• tourism</li> <li>• commercial trade.</li> </ul> </li> <li>3. Identify and describe six or more scenarios where wildlife is important in environmental contexts; e.g.:           <ul style="list-style-type: none"> <li>• water, air and soil quality</li> <li>• diversity of life forms</li> <li>• maintenance of ecosystems.</li> </ul> </li> <li>4. Summarize the results of interviews with 10 or more different people regarding the social/cultural, economic and/or environment significance of wildlife (see WLD105-2).</li> </ol>



**Directions:**

1. Create a survey including at least 10 questions that will address the environmental significance of wildlife. (Some sample questions are provided, but think of at least two questions of your own.)
2. Summarize the survey results with a graph. The graph should include:
  - a) the percentage of those surveyed who participate indirectly in wildlife-related activities (e.g., watching films or TV programs on wildlife, reading about wildlife, visiting zoos, game farms or natural science museums, purchasing wildlife posters, arts or crafts, member of wildlife organizations)
  - b) the percentage of those surveyed who participate in non-consumptive wildlife-related activities (e.g., hiking, camping, watching wildlife, photographing wildlife, feeding wildlife, studying wildlife)
  - c) the percentage of those surveyed who participate in consumptive wildlife-related activities (e.g., hunting of mammals and/or birds, fishing, trapping).
2. Present the results of the survey. Presentation to include:
  - a) a visual display of graphed results (overhead, poster, etc.)
  - b) a clear explanation of summarized results
  - c) a summary of the most interesting thing you learned from doing this assignment.

**Sample Survey Questions:**

- Are wildlife/wilderness areas important to you? Why or why not?
- Can you describe at least two benefits of wildlife to society?
- Describe two activities that you participate in that allow you to interact with wildlife/wilderness areas.
- How many times in one year have you encountered wildlife during trips/outings?
- Do you watch wildlife programs on TV?
- Do you buy birdfeed on an annual basis? Do you like to watch birds? Why?
- Do you read magazines/books about wildlife?
- Do you visit zoos, game farms or natural science museums?
- Do you purchase wildlife posters, arts, or crafts?
- Do you hunt, fish or trap?
- Are you a member of a wildlife organization?
- How often do you participate in wildlife-related activities in one year?
- If you hunt, fish or camp, approximately how much money do you spend on licences, ammunition, gas, food, park permits, film, etc., in one year?
- If wildlife/wilderness areas were in serious trouble, would you be willing to pay a wildlife "tax" to help protect and conserve them? Why or why not?
- What do you do to "escape" the hustle and bustle of city life?

Reference: *The Importance of Wildlife to Canadians* (Highlights of the 1981 National Survey, p. 40). Ottawa, Ontario: Minister of Supply and Services Canada, 1985.

**RESEARCH PROCESS: Impacts on Wildlife and Habitat****WLD1050-3**

TASK	OBSERVATION/RATING			
Preparation and Planning	4	3	2	1
Information Gathering and Processing	4	3	2	1
Content	4	3	2	1
Collaboration and Teamwork	4	3	2	1
Information Sharing	4	3	2	1

**STANDARD IS 1 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

TASK CHECKLIST	
<i>The student:</i>	<p><b>Content (continued)</b></p> <p><input type="checkbox"/> describes specific ways in which technological and/or economic development may affect wildlife and its habitat; e.g.:</p> <ul style="list-style-type: none"> <li>– transportation</li> <li>– energy and mineral development</li> <li>– agricultural and forestry practices</li> </ul> <p><input type="checkbox"/> describes specific ways in which resource development may affect wildlife and its habitat; e.g.:</p> <ul style="list-style-type: none"> <li>– resource extraction</li> <li>– patterns/levels of consumption</li> <li>– land use practices</li> </ul>
<p><b>Preparation and Planning</b></p> <p><input type="checkbox"/> sets goals and follows instructions accurately</p> <p><input type="checkbox"/> adheres to established timelines</p> <p><input type="checkbox"/> responds to directed questions and follows necessary steps to find answers</p> <p><input type="checkbox"/> uses time effectively</p>	
<p><b>Information Gathering and Processing</b></p> <p><input type="checkbox"/> accesses basic school/community information sources</p> <p><input type="checkbox"/> uses one or more information-gathering techniques</p> <p><input type="checkbox"/> interprets and organizes information in a logical sequence</p> <p><input type="checkbox"/> records information accurately using correct technical terms</p> <p><input type="checkbox"/> distinguishes between fact and fiction/opinion/theory</p> <p><input type="checkbox"/> responds to feedback when current approaches are not working</p>	
<p><b>Collaboration and Teamwork</b></p> <p><input type="checkbox"/> cooperates with group members</p> <p><input type="checkbox"/> shares work appropriately among group members</p>	
<p><b>Information Sharing</b></p> <p><input type="checkbox"/> demonstrates effective use of one or more communication media: <i>e.g., written, oral, audio-visual</i></p> <p><input type="checkbox"/> communicates information in a logical sequence</p> <p><input type="checkbox"/> uses correct grammatical convention and technical terms</p> <p><input type="checkbox"/> cites three or more basic information sources</p>	

**REFLECTIONS/COMMENTS**

G.54/ Wildlife, CTS

(1997)

Assessment Tools

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**KNOWLEDGE/APPLICATION ASSESSMENT: Principles of Wildlife Management****WLD1070-1****Assessment Criteria and Conditions:**

- identifying and explaining basic principles of wildlife management and the role of regulated hunting in game management.

**Suggested Reference(s):**

- Alberta Conservation and Hunter Education*
- Project Wild*
- A Wildlife Policy for Canada*
- The Status of Wildlife in Alberta*

**STANDARD:** Respond to a minimum standard of 1 on the rating scale

**Rating Scale**

*The student:*

- meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
- meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- does not complete task, or is unable to provide a suitable response.

N/A Not applicable

Background Information	Sample Questions/Activities
<p>See the <i>Alberta Conservation and Hunter Education Manual</i>:</p> <ul style="list-style-type: none"> <li>Hunting Ethics               <ul style="list-style-type: none"> <li>Definition of Ethics and Laws</li> <li>Personal Code of Ethics</li> <li>Ethics for Consideration</li> <li>Importance of Ethics</li> </ul> </li> <li>Role of the Hunter</li> <li>Wildlife Management:               <ul style="list-style-type: none"> <li>Basic Principle of Ecology</li> <li>Game Management and Conservation</li> <li>Predators and Problem Wildlife</li> </ul> </li> </ul>	<ol style="list-style-type: none"> <li>Identify the goals of game management and agencies responsible for managing Alberta's game animals.</li> <li>Identify and describe components/techniques of a game management plan; e.g.:               <ul style="list-style-type: none"> <li>biological research</li> <li>inventory</li> <li>habitat manipulation</li> <li>management of wildlife populations</li> </ul> </li> <li>Explain the role of regulated hunting in game management and conservation.</li> <li>Describe responsibilities of the hunter in reporting conditions that may endanger wildlife; e.g.:               <ul style="list-style-type: none"> <li>pollution and its effect on wildlife</li> <li>habitat loss and abuse</li> <li>threats to rare and endangered species</li> <li>neglect of wildlife laws</li> </ul> </li> <li>Identify ethical considerations that provide a social standard for conduct when hunting; e.g.:               <ul style="list-style-type: none"> <li>hunter-landowner relations</li> <li>regard for other land users</li> <li>respect for self</li> <li>respect for wildlife</li> <li>respect for laws and enforcement officers</li> </ul> </li> </ol>

**Assessment Tools**

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CTS, Wildlife /G.55  
(1997)

**POSITION PAPER: Hunting Ethics**

**WLD1070-2**

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0 N/A
Content	4	3	2	1	0 N/A
Presenting/Reporting	4	3	2	1	0 N/A

**STANDARD IS 1 IN EACH APPLICABLE TASK**

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
  - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
  - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
  - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
  - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**TASK CHECKLIST**

*The student:*

**Preparation and Planning**

- ☐ sets goals and follows instructions accurately
- ☐ responds to directed questions and follows necessary steps to find answers
- ☐ accesses basic in-school/community information sources

- ☐ interprets and organizes information into a logical sequence
- ☐ records information accurately using correct technical terms
- ☐ uses time effectively

**Content**

- ☐ provides a clear and concise statement of an issue regarding hunting ethics
- ☐ examines social, political, scientific, ethical, economic and/or environmental perspectives related to the issue
- ☐ provides detailed examples of the consequences of previous human activities relevant to the issue
- ☐ develops a logical argument and conclusion regarding the issue, and provides a rationale for the position taken

**Content (continued)**

- ☐ develops a plan of action for dealing with the issue at local and/or global levels
- ☐ provides a glossary of terms relevant to the issue

**Presenting/Reporting**

- ☐ demonstrates effective use of one or more communication media  
*e.g., Written: spelling, punctuation, grammar basic format*

*Oral: voice projection, body language*

*Audio-Visual: techniques, tools*

- ☐ uses correct grammatical convention and technical terms through proofreading/editing
- ☐ provides an introduction that describes the purpose of the project
- ☐ communicates information in a logical sequence
- ☐ states a conclusion based on a summary of facts
- ☐ provides a reference list of three or more basic information sources

**REFLECTIONS/COMMENTS**



## GUIDE TO WILDLIFE IDENTIFICATION

WLD1070-3

## BIG GAME UNGULATES

	Common Name	Characteristics/ Habits	Habitat/ Range
<b>Horned Ungulates</b>			
Bighorn Sheep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mountain Goat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pronghorn Antelope	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Antlered Ungulates</b>			
Moose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
White-tailed Deer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mule Deer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Caribou	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elk	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## BIG GAME CARNIVORES

	Common Name	Characteristics/ Habits	Habitat/ Range
Cougar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wolf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coyote	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grizzly Bear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Black Bear	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## UPLAND GAME BIRDS

	Common Name	Characteristics/ Habits	Habitat/ Range
Willow Ptarmigan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
White-tailed Ptarmigan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sage Grouse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sharp-tailed Grouse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ruffed Grouse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spruce Grouse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blue Grouse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ring-necked Pheasant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hungarian Partridge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## WATERFOWL

	Common Name	Characteristics/ Habits	Habitat/ Range
<b>Puddle Ducks</b>			
Mallard	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pintail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Green-winged Teal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Blue-winged Teal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shoveller	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gadwall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wigeon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Diving Ducks</b>			
Bufflehead	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Red Head	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Canvasback	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lesser Scaup	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ring-Necked Duck	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Common Goldeneye	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Geese</b>			
Canada Goose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
White-Fronted Goose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Snow Goose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ross's Goose	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**STANDARD:** The student is able to identify by common name, characteristics/habits and habitat/range:

- ☐ eight big game ungulates (including horned and antlered animals)
- ☐ five big game carnivores
- ☐ eight upland game birds
- ☐ 16 waterfowl (including puddle ducks, diving ducks and geese)

REFERENCE GUIDES (available from Alberta Fish and Wildlife)

- *Alberta Conservation and Hunter Education Manual*
- Horn, Fur and Slide Kits.

**TASK CHECKLIST: First Aid and Outdoor Survival**

**WLD1070-4**

<b>FIRST AID AND SURVIVAL</b> <b>(PERFORMANCE STANDARD IS 2 IN EACH TASK AREA)</b>	
<b>The student:</b> <input type="checkbox"/> identifies factors that affect ability to cope in emergency situations in the outdoors; e.g.: <input type="checkbox"/> pain and cold <input type="checkbox"/> thirst and hunger <input type="checkbox"/> fatigue, boredom and loneliness <input type="checkbox"/> fear	<input type="checkbox"/> describes the basic objectives of first aid
<input type="checkbox"/> demonstrates general procedures for examining someone who is hurt or suddenly becomes ill in the outdoors	<input type="checkbox"/> identifies and assembles essential items to include in first-aid and survival kits
<input type="checkbox"/> demonstrates basic emergency techniques for artificial respiration	<input type="checkbox"/> demonstrates basic emergency techniques to control bleeding from cuts
<input type="checkbox"/> demonstrates basic emergency techniques to provide care for victims of shock or concussion	<input type="checkbox"/> demonstrates basic emergency techniques for the care of sprains, fractures and dislocations

<input type="checkbox"/> demonstrates basic emergency techniques for the treatment of burns, blisters and frostbite	<input type="checkbox"/> demonstrates basic emergency techniques for the care of animal and insect bites
<input type="checkbox"/> describes personal responsibilities after administering emergency first aid, and other actions that may need to be considered: <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____	<input type="checkbox"/> explains strategies for dealing with hypothermia in specific situations; e.g.: <input type="checkbox"/> symptoms <input type="checkbox"/> treatment <input type="checkbox"/> prevention
<input type="checkbox"/> demonstrates basic fire-building techniques in the outdoors; e.g.: <input type="checkbox"/> fire location <input type="checkbox"/> fuel <input type="checkbox"/> ignition	<input type="checkbox"/> explains different shelter-building techniques appropriate to specific outdoor environments; e.g.: <input type="checkbox"/> fallen tree shelter <input type="checkbox"/> lean-to shelter <input type="checkbox"/> snow cave shelter

<input type="checkbox"/> explains different methods of signalling and their application in specific situations; e.g.: <input type="checkbox"/> flare signals <input type="checkbox"/> fire signals <input type="checkbox"/> mirror signals <input type="checkbox"/> sound signals <input type="checkbox"/> information signals	<input type="checkbox"/> explains basic methods of securing water and food in outdoor survival situations; e.g.: <input type="checkbox"/> purifying water <input type="checkbox"/> avoiding poisonous plants <input type="checkbox"/> shooting, spearing, snaring, trapping or hooking animals
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>

## TASK CHECKLIST: First Aid and Outdoor Survival (continued)

WLD1070-4

OUTDOOR EQUIPMENT (PERFORMANCE STANDARD IS 1 ON EACH TASK AREA)	
<p><b>The student:</b></p> <p><input type="checkbox"/> describes the function and characteristics of suitable outdoor clothing; e.g.:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> underwear</li> <li><input type="checkbox"/> shirt, pants and coat</li> <li><input type="checkbox"/> boots and socks</li> <li><input type="checkbox"/> gloves, mitts and headgear</li> </ul> <p><input type="checkbox"/> describes the function and characteristics of suitable outdoor bedding; e.g.:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> sleeping bag</li> <li><input type="checkbox"/> pillow</li> <li><input type="checkbox"/> mattress</li> </ul> <p><input type="checkbox"/> explains different types and styles of tents appropriate to specific outdoor situations; e.g.:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> wall tent</li> <li><input type="checkbox"/> forester's tent</li> <li><input type="checkbox"/> mountaineer's tent</li> <li><input type="checkbox"/> lean-to tent</li> </ul> <p><input type="checkbox"/> identifies important features of manufactured tents; e.g.:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> sod cloth</li> <li><input type="checkbox"/> mosquito screen</li> <li><input type="checkbox"/> tent colour</li> <li><input type="checkbox"/> waterproofing</li> <li><input type="checkbox"/> vestibule</li> </ul> <p><input type="checkbox"/> demonstrates proper storage procedures for tents</p> <p><input type="checkbox"/> demonstrates fabric repair techniques for tents</p>	

<input type="checkbox"/>	explains applications of different types of knives and axes in outdoor situations
<input type="checkbox"/>	explains techniques for safely selecting, handling and using knives and axes
<input type="checkbox"/>	explains techniques for the safe storage of knives and axes
<input type="checkbox"/>	explains techniques for safely sharpening knives and axes
<input type="checkbox"/>	demonstrates the use of the compass in outdoor navigation
<input type="checkbox"/>	demonstrates use of maps in outdoor navigation
<input type="checkbox"/>	describes desirable characteristics and applications of different types of backpacking equipment in outdoor excursions; e.g.:
	<input type="checkbox"/> packboards
	<input type="checkbox"/> packsacks
<input type="checkbox"/>	demonstrates techniques for putting on, carrying and taking off a loaded backpack
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	
<input type="checkbox"/>	

**Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**REFLECTIONS/COMMENTS**

# **KNOWLEDGE/APPLICATION ASSESSMENT: Principles of Fisheries Management**

WLD1080-1

## **Assessment Criteria and Conditions:**

- identifying and explaining:
  - principles of fisheries management and the role of recreational fishing in managing fish resources
  - ethical and legal responsibilities of individuals involved in game fishing.

## **Suggested Reference(s):**

- Alberta Fishing Education Program*
- Project Wild*
- A Wildlife Policy for Canada*
- The Status of Wildlife in Alberta*
- Alberta Guide to Sportfishing*

**STANDARD:** Respond to a minimum standard of 1 on the rating scale

## **Rating Scale**

*The student:*

- meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
- meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- completes task as directed, demonstrating basic skills/competence by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- does not complete task, or is unable to provide a suitable response.

N/A Not applicable

Background Information	Sample Questions/Activities
<p>See the <i>Alberta Fishing Education Program Manual</i>:</p> <ul style="list-style-type: none"> <li>Management:                             <ul style="list-style-type: none"> <li>Fishing Regulations</li> <li>Size Limits/Bait Restrictions</li> <li>Daily Catch and Possession Limits</li> <li>Fish Stocking</li> <li>Aquatic Habitat Development and Improvement</li> <li>Commercial/Domestic Fishing</li> </ul> </li> <li>Ethical Behaviour:                             <ul style="list-style-type: none"> <li>Definition of Ethics</li> <li>Personal Code of Ethics</li> <li>Fisherman – Landowner Relations</li> <li>Relationship with other Fishermen</li> <li>Self-Respect</li> <li>Catch and Release Fishing</li> <li>Respect of Laws</li> <li>Importance of Ethics</li> </ul> </li> <li>Legal Responsibilities:                             <ul style="list-style-type: none"> <li>Legal Process</li> <li>The Purpose of Fishing Laws</li> <li>Laws to Protect and Conserve Fish</li> <li>Small Vessel Regulations</li> <li>Criminal Code</li> <li><i>Litter Act</i></li> <li>Creating or Changing Laws</li> <li>Interpretation of the Law</li> <li>Access to Public and Private Lands</li> </ul> </li> </ul>	<ol style="list-style-type: none"> <li>Identify the goals of fisheries management and the agencies responsible for managing Alberta's fish resources.</li> <li>Identify and describe components/techniques of a fish management plan; e.g.:                             <ul style="list-style-type: none"> <li>biological research</li> <li>inventory</li> <li>habitat improvement and manipulation</li> <li>law enforcement/public information</li> </ul> </li> <li>Explain the role of recreational fishing in the management and conservation of fish resources.</li> <li>Identify ethical considerations that provide a social standard of conduct for sport fishing; e.g.:                             <ul style="list-style-type: none"> <li>fisherman – landowner relations</li> <li>regard for other people</li> <li>respect for the fisheries resource</li> <li>respect for laws and law enforcement</li> <li>catch-and-release fishing</li> </ul> </li> <li>Describe fishing regulations and related legislation that provide a legal standard of conduct for sport fishing; e.g.:                             <ul style="list-style-type: none"> <li>laws to protect and conserve fish stocks</li> <li>laws to govern activities of the fisherman</li> <li>boating restrictions</li> <li>litter control.</li> </ul> </li> </ol>



**POSITION PAPER: Fishing Ethics****WLD1080-2**

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0
Content	4	3	2	1	0
Presenting/ Reporting	4	3	2	1	0
	N/A				

**STANDARD IS 1 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**TASK CHECKLIST***The student:***Preparation and Planning**

- ☐ sets goals and follows instructions accurately
- ☐ responds to directed questions and follows necessary steps to find answers
- ☐ accesses basic in-school/community information sources

- ☐ interprets and organizes information into a logical sequence
- ☐ records information accurately using correct technical terms
- ☐ uses time effectively

**Content**

- ☐ provides a clear and concise statement of an issue regarding fishing ethics
- ☐ examines social, political, scientific, ethical, economic and/or environmental perspectives related to the issue
- ☐ provides detailed examples of the consequences of previous human activities relevant to the issue
- ☐ develops a logical argument and conclusion regarding the issue, and provides a rationale for the position taken

**Content (continued)**

- ☐ develops a plan of action for dealing with the issue at local and/or global levels
- ☐ provides a glossary of terms relevant to the issue.

**Presenting/Reporting**

- ☐ demonstrates effective use of one or more communication media:  
*e.g., Written: spelling, punctuation, grammar*  
*basic format*

*Oral: voice projection, body language**Audio-Visual: techniques, tools*

- ☐ uses correct grammatical convention and technical terms through proofreading/editing
- ☐ provides an introduction that describes the purpose of the project
- ☐ communicates information in a logical sequence
- ☐ states a conclusion based on a summary of facts
- ☐ provides a reference list of three or more basic information sources

**REFLECTIONS/COMMENTS:**

## GUIDE TO FISH IDENTIFICATION

WLD1080-3

## SALMONIDS

Common Name	Physical Characteristics	Habitat/Range	Spawning/Feeding Habits
Rainbow Trout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cutthroat Trout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brown Trout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bull Trout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lake Trout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Brook Trout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Golden Trout	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Arctic Grayling	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mountain Whitefish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lake Whitefish	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cisco (Tullibee)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**STANDARD:** The student is able to identify by common name, physical characteristics, habitat/range and spawning/feeding habits:

- ☐ 10 species of salmonids
- ☐ 3 species of percids
- ☐ 4 other species of game fish.

## PERCIDS

Common Name	Physical Characteristics	Habitat/Range	Spawning/Feeding Habits
Yellow Perch	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walleye	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sauger	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## OTHER GAME FISH

Common Name	Physical Characteristics	Habitat/Range	Spawning/Feeding Habits
Northern Pike	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lake Sturgeon	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Burbot (Ling)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Goldeye	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sucker	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## REFERENCE GUIDES:

- *Alberta Fishing Education Manual*
- *Alberta Fishing Regulations*
- *Slide Kits: Identification of Alberta Fish*  
(available from Alberta Fish and Wildlife)

**TASK CHECKLIST: Fishing Equipment and Techniques****WLD1080-4**

<b>FISHING EQUIPMENT</b>	
<p><b>The student:</b></p> <p><input type="checkbox"/> describes the characteristics, use and care of common types of fishing equipment:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> fishing rods and reels</li> <li><input type="checkbox"/> lines and knots</li> <li><input type="checkbox"/> hooks and artificial lures</li> <li><input type="checkbox"/> snap swivels and wire leaders</li> <li><input type="checkbox"/> sinkers, down riggers and floats</li> <li><input type="checkbox"/> creels and nets</li> <li><input type="checkbox"/> tackle boxes</li> <li><input type="checkbox"/> survival and first-aid kits</li> </ul>	
<b>FIELD TECHNIQUES</b>	
<p><b>The student:</b></p> <p><input type="checkbox"/> describes the nature and purpose of different angling techniques:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> spin fishing/spin casting</li> <li><input type="checkbox"/> bait fishing/bait casting</li> <li><input type="checkbox"/> fly fishing</li> <li><input type="checkbox"/> trolling</li> <li><input type="checkbox"/> ice fishing</li> <li><input type="checkbox"/> bow fishing</li> <li><input type="checkbox"/> catch-and-release fishing</li> </ul>	
<b>FIELD CARE OF FISH</b>	
<p><b>The student:</b></p> <p><input type="checkbox"/> explains techniques for the care of:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> table fish</li> <li><input type="checkbox"/> trophy fish</li> </ul>	

<b>HANDLING/COOKING TABLE FISH</b>	
<p><b>The student:</b></p> <p><input type="checkbox"/> demonstrates/explains techniques for handling table fish:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> cleaning/dressing</li> <li><input type="checkbox"/> scaling</li> <li><input type="checkbox"/> skinning and filleting</li> <li><input type="checkbox"/> freezing and canning</li> </ul> <p><input type="checkbox"/> demonstrates/explains techniques for cooking table fish</p> <p><input type="checkbox"/></p>	
<b>SAFETY PRACTICES</b>	
<p><b>The student:</b></p> <p><input type="checkbox"/> identifies general safety considerations relevant to fishing (e.g., wading, hook safety, storms, currents)</p> <p><input type="checkbox"/> explains specific safety practices relevant to fishing:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> boat safety</li> <li><input type="checkbox"/> ice safety</li> <li><input type="checkbox"/> bear safety</li> </ul> <p><input type="checkbox"/> describes emergency first-aid and survival techniques:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> items to include in first-aid and survival kits</li> <li><input type="checkbox"/> basic first-aid and survival techniques</li> </ul> <p><input type="checkbox"/></p>	

**STANDARD IS 2 FOR EACH TASK IDENTIFIED ON THE CHECKLIST****Rating Scale***The student:*

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

**REFLECTION/COMMENTS**

# **KNOWLEDGE/APPLICATION ASSESSMENT: Significance of Wildlife**

WLD2020-1

## **Assessment Criteria and Conditions:**

- comparing and contrasting the social, environmental and economic significance of wildlife within two cultures (e.g., First Nation, European, Asian).

## **Suggested Reference(s):**

- *The Nature of Canada: A Primer on Spaces and Species*
- *A Primer on Environmental Citizenship*
- *Project Wild*

**STANDARD: Respond to a minimum standard of 2 on the rating scale**

## **Rating Scale**

*The student:*

- 4 meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- 3 meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
- 2 meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- 1 completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- 0 does not complete task, or is unable to provide a suitable response.

N/A Not applicable

G.64/ Wildlife, CTS

(1997)

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Background Information	Sample Questions/Activities
<p>See <i>The Nature of Canada: A Primer on Spaces and Species</i>:</p> <ul style="list-style-type: none"> <li>• Chapter 3 – The Cultural Heritage Perspective</li> <li>• Chapter 4 – The Importance of Spaces and Species.</li> </ul> <p>Q42: How does the environment affect culture?</p> <p>Q43: How does culture affect the environment?</p> <p>Q48: How can history help us protect our environment in the future?</p> <p>Q56: Why should we value the natural environment?</p> <p>Q58: In what ways do people depend on the natural environment for survival?</p> <p>Q59: How does the health of wildlife relate to our own health?</p> <p>Q60: How do plants and animals help us stay healthy?</p> <p>Q61: Do spaces and species contribute to our psychological and emotional health?</p> <p>Q62: How do spaces and species contribute to our economic well-being?</p> <p>Q66: What is wildlife worth in dollars and cents?</p> <p>Q67: How have spaces and species contributed to human knowledge?</p> <p>Q69: How will the preservation of spaces and species benefit us in the future?</p>	<p>1. Compare and contrast the significance of wildlife in two cultures; e.g.:</p> <ul style="list-style-type: none"> <li>– recreational</li> <li>– medicinal</li> <li>– spiritual and aesthetic</li> </ul> <p>2. Cite instances within two cultures where human and wildlife relationships are expressed through religious teachings, art, music, drama, literature, photography and/or other means of communication.</p> <p>3. Compare and contrast the economic significance of wildlife within two cultures; e.g.:</p> <ul style="list-style-type: none"> <li>– subsistence</li> <li>– commercial trade</li> <li>– tourism</li> </ul> <p>4. Compare and contrast the environmental significance of wildlife within two cultures; e.g.:</p> <ul style="list-style-type: none"> <li>– indicator species</li> <li>– biodiversity</li> <li>– water, air and soil quality</li> </ul>



## CRITERIA FOR PLANNING AN ECOTOUR

WLD2020-2

RATING	PLANNING CRITERIA
4 3 2 1 0	<p><i>The student:</i></p> <p><b>Reasons for Taking the Tour</b></p> <p><input type="checkbox"/> provides a rationale for taking the tour; e.g.:</p> <ul style="list-style-type: none"> <li>– recreational</li> <li>– health</li> <li>– spiritual/aesthetic</li> </ul> <p><input type="checkbox"/> identifies economic considerations; e.g.:</p> <ul style="list-style-type: none"> <li>– revenue to the community</li> </ul> <p><input type="checkbox"/> identifies environmental considerations; e.g.:</p> <ul style="list-style-type: none"> <li>– impact of activities</li> </ul> <p><input type="checkbox"/></p> <p><b>Tour Agenda/Itinerary</b></p> <p><input type="checkbox"/> establishes a route plan and mode(s) of travel</p> <p><input type="checkbox"/> establishes a timeline for travel</p> <p><input type="checkbox"/> identifies and maps points of interest along the route</p> <p><input type="checkbox"/> plans activities for participants throughout the tour</p> <p><input type="checkbox"/></p> <p><b>Tour Details</b></p> <p><input type="checkbox"/> establishes accommodation, meal and clothing needs for tour participants</p> <p><input type="checkbox"/> prepares a comprehensive list of equipment and supplies required</p> <p><input type="checkbox"/> establishes a budget for the tour</p> <p><input type="checkbox"/> identifies safety hazards and emergency response procedures</p> <p><input type="checkbox"/> addresses legal matters relevant to the tour; e.g.:</p> <ul style="list-style-type: none"> <li>– environmental regulation</li> <li>– impending liabilities</li> <li>– insurance requirements</li> </ul> <p><input type="checkbox"/></p> <p><b>Guidelines for Minimal Environmental Impact</b></p> <p><input type="checkbox"/> explains basic principles of ecotourism</p> <p><input type="checkbox"/> identifies five or more guidelines for ensuring minimal environmental impact while en route</p> <p><input type="checkbox"/> reflects on the strengths/limitations of the plan for minimal environmental impact, and suggests refinements</p> <p><input type="checkbox"/></p>

## STANDARD IS 2 IN EACH APPLICABLE TASK

## Rating Scale

*The student:*

4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.

3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.

2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.

1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.

0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

## REFLECTIONS/COMMENTS

## Sample Ecotours

- Whale Watching at Tofino
- A Nahanni Canoe Trip
- Horseback Riding in Waterton National Park

**TASK CHECKLIST: Outdoor Experiences 2**

**WLD2030-1**

TRIP PLANNING AND PREPARATION	
<b>The student:</b>	<input type="checkbox"/> establishes specific objectives for an outdoor wilderness trip; e.g.: <input type="checkbox"/> goals and expectations <input type="checkbox"/> length of trip <input type="checkbox"/> destination <input type="checkbox"/> general itinerary and daily agendas <input type="checkbox"/> prepares a camping menu for self that addresses: <input type="checkbox"/> expected caloric output <input type="checkbox"/> all food groups included in the <i>Canada's Food Guide for Healthy Eating</i> <input type="checkbox"/> concerns related to food spoilage <input type="checkbox"/> provisions for emergency <input type="checkbox"/> plans for weather and seasonal conditions; e.g.: <input type="checkbox"/> identifies hazards particular to the area <input type="checkbox"/> listens to weather and news reports/forecasts <input type="checkbox"/> incorporates guidelines for environmental awareness into trip planning; e.g.: <input type="checkbox"/> principles of ecotourism <input type="checkbox"/> consideration for carrying capacity <input type="checkbox"/> strategies for minimum impact land use <input type="checkbox"/> identifies and obtains appropriate supplies, equipment and personal gear for the trip; e.g.: <input type="checkbox"/> water and food <input type="checkbox"/> tent, stove, axe <input type="checkbox"/> first aid and survival supplies <input type="checkbox"/> clothing and foot wear <input type="checkbox"/> toiletries

TRIP PLANNING AND PREPARATION (continued)	
<b>The student:</b>	<input type="checkbox"/> conduct pre-trip assessment of supplies, equipment and personal gear; e.g.: <input type="checkbox"/> compares to trip checklist <input type="checkbox"/> assesses quality, quantity and condition <input type="checkbox"/> assesses weather and seasonal conditions <input type="checkbox"/> obtains missing and/or specialty items <input type="checkbox"/> prepares supplies, equipment and personal gear for transportation; e.g.: <input type="checkbox"/> addresses weight restrictions <input type="checkbox"/> makes efficient use of space <input type="checkbox"/> packs food to prevent spoilage and minimize odour <input type="checkbox"/> plans course of action to cope with potential emergency situations in the wilderness; e.g.: <input type="checkbox"/> extreme weather conditions <input type="checkbox"/> fire or flood <input type="checkbox"/> injury and illness <input type="checkbox"/> avalanche <input type="checkbox"/> reviews legislation and policy requirements relevant to area being visited; e.g.: <input type="checkbox"/> information regarding dangers inherent in the area <input type="checkbox"/> permits/licences that may be required <input type="checkbox"/> <input type="checkbox"/>

CONDUCTING THE TRIP	
<b>The student:</b>	<input type="checkbox"/> follows guidelines for safe travel in an outdoor environment; e.g.: <input type="checkbox"/> follows travel schedule as planned <input type="checkbox"/> uses orientation and navigational skills <input type="checkbox"/> identifies potential hazards and takes necessary precautions <input type="checkbox"/> dresses according to mode of travel, weather and season <input type="checkbox"/> watches for changes in current weather conditions <input type="checkbox"/> sets up campsite following guidelines for comfort, safety and least possible environmental impact; e.g.: <input type="checkbox"/> selects appropriate campsite <input type="checkbox"/> erects tent or lean-to <input type="checkbox"/> assembles other amenities <input type="checkbox"/> protects food from wildlife and spoilage <input type="checkbox"/> protects equipment from the elements <input type="checkbox"/> follows minimal impact guidelines in establishing and using campsite; e.g.: <input type="checkbox"/> latrine location and toilet procedures <input type="checkbox"/> wash area and procedures <input type="checkbox"/> fire site and use <input type="checkbox"/> garbage and waste water disposal <input type="checkbox"/> complies with local, provincial and federal legislation relevant to activities that are undertaken <input type="checkbox"/> assumes camp duties on a rotational basis; e.g.: <input type="checkbox"/> meal preparation <input type="checkbox"/> camp maintenance and hygiene

## TASK CHECKLIST: Outdoor Experiences 2 (continued)

WLD2030-1

CONDUCTING THE TRIP (continued)	
<i>The student:</i>	
<input type="checkbox"/> monitors the activities of wildlife in the area and takes precautions to avoid dangerous situations	
<input type="checkbox"/>	
<input type="checkbox"/>	

WILDERNESS INTERACTION	
<i>The student:</i>	
<input type="checkbox"/> identifies 25 insect, bird, mammal and/or other animal species	
<input type="checkbox"/> identifies 25 tree, shrub and/or other plant species	
<input type="checkbox"/> identifies, while demonstrating appropriate safety/health precautions, five different: <input type="checkbox"/> animal tracks and scat <input type="checkbox"/> hazardous plants	
<input type="checkbox"/> identifies five or more uses of plants and/or animals for human survival and comfort in the wilderness environment	
<input type="checkbox"/> spends three hours alone in a designated wilderness area, and shares experiences and coping strategies	

WILDERNESS INTERACTION (continued)	
<i>The student:</i>	
<input type="checkbox"/>	
<input type="checkbox"/>	

BREAKING CAMP AND CONCLUDING THE TRIP	
<i>The student:</i>	
<input type="checkbox"/> follows appropriate procedures for breaking camp: <input type="checkbox"/> packs supplies, equipment and personal gear <input type="checkbox"/> takes down shelter <input type="checkbox"/> cleans site and removes waste <input type="checkbox"/> does circle tour of site	
<input type="checkbox"/> conducts a post-trip assessment: <input type="checkbox"/> observations and personal impressions <input type="checkbox"/> activities well done <input type="checkbox"/> problems encountered <input type="checkbox"/> recommendations regarding future trips	
<input type="checkbox"/>	
<input type="checkbox"/>	

STANDARD IS 2 IN EACH APPLICABLE TASK AREA

## Rating Scale

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

## REFLECTIONS/COMMENTS

# POST-TRIP ASSESSMENT FOR OUTDOOR EXPERIENCES 2

WLD2030-2

TASK	OBSERVATION/RATING				
Individual/Group Preparedness	4	3	2	1	0
Cooperation and Teamwork	4	3	2	1	0
Responsibility and Safety	4	3	2	1	0
Environmental Ethics	4	3	2	1	0

## STANDARD IS 2 IN EACH APPLICABLE TASK

### Rating Scale

*The student:*

- exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

TASK CHECKLIST	
<i>The student:</i>	
<b>Individual/Group Preparedness</b> <input type="checkbox"/> sets goals and follows instructions accurately <input type="checkbox"/> adheres to established timelines <input type="checkbox"/> identifies/assembles outdoor gear appropriate to the task <input type="checkbox"/> uses time effectively <input type="checkbox"/> identifies tasks well done <input type="checkbox"/> identifies problems encountered and suggests solutions <input type="checkbox"/> makes recommendations regarding future trips	<b>Responsibility and Safety</b> <input type="checkbox"/> selects and uses appropriate equipment/materials <input type="checkbox"/> follows safe procedures/techniques <input type="checkbox"/> anticipates and advises of potential hazards <input type="checkbox"/> practises proper sanitation procedures <input type="checkbox"/> identifies tasks well done <input type="checkbox"/> identifies problems encountered and suggests solutions <input type="checkbox"/> makes recommendations regarding future trips
<b>Cooperation and Teamwork</b> <input type="checkbox"/> works with a range of peer members <input type="checkbox"/> shares work appropriately among group members <input type="checkbox"/> considers the ideas/suggestions of others <input type="checkbox"/> identifies tasks well done <input type="checkbox"/> identifies problems encountered and suggests solutions <input type="checkbox"/> makes recommendations regarding future trips	<b>Environmental Ethics</b> <input type="checkbox"/> uses environmentally friendly materials <input type="checkbox"/> picks up garbage and carries out everything that is carried in <input type="checkbox"/> avoids ecologically sensitive areas <input type="checkbox"/> demonstrates techniques for protecting water supply <input type="checkbox"/> identifies tasks well done <input type="checkbox"/> identifies problems encountered and suggests solutions <input type="checkbox"/> makes recommendations regarding future trips

### REFLECTIONS/COMMENTS:



**RESEARCH PROCESS: Representative Wildlife Spaces and Species****WLD2040-1**

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0 N/A
Information Gathering and Processing	4	3	2	1	0 N/A
Content	4	3	2	1	0 N/A
Collaboration and Teamwork	4	3	2	1	0 N/A
Information Sharing	4	3	2	1	0 N/A

**STANDARD IS 2 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

**Assessment Tools**

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**TASK CHECKLIST***The student:***Preparation and Planning**

- ☐ sets goals and establishes steps to achieve them
- ☐ creates and adheres to useful timelines
- ☐ uses personal initiative to formulate questions and find answers
- ☐ plans and uses time effectively

**Information Gathering and Processing**

- ☐ accesses a range of relevant in-school/community resources

- ☐ uses a range of information-gathering techniques

- ☐ interprets, organizes and combines information into a logical sequence

- ☐ records information accurately with appropriate supporting detail and using correct technical terms

- ☐ determines accuracy/currency/reliability of information sources

- ☐ gathers and responds to feedback regarding approach to the task

**Content**

- ☐ provides an outline map of Canada that identifies seven major ecoregions

- ☐ provides an outline map of the world that identifies five World Heritage sites

- ☐ identifies and describes the characteristics of at least five indicator species for an ecoregion of Canada

**Content (continued)**

- ☐ identifies and describes at least five regulating factors for one of Canada's wildlife species; e.g.:

- food, water and habitat
- carrying capacity
- predators and species competition
- disease and pests

- ☐ compares and contrasts an ecoregion of Canada with a similar ecoregion in another part of the world, considering:

- climate
- geography
- indicator species

**Collaboration and Teamwork**

- ☐ cooperates with group members
- ☐ shares work appropriately among group members
- ☐ negotiates solutions to problems

**Information Sharing**

- ☐ demonstrates effective use of two or more communication media:

*e.g., written, oral, audio-visual*

- ☐ communicates ideas in a logical sequence with sufficient supporting detail

- ☐ maintains acceptable grammatical and technical standards

- ☐ cites five or more relevant information sources

**REFLECTIONS/COMMENTS:**

**SAMPLE ASSESSMENT ITEMS: Canada's Spaces and Species**

WLD2040-2

**Sample Assessment Items**

For centuries, most people in Canada believed that the resources would never run out. But now there is a growing awareness that this isn't true. Test your awareness with the following quiz on Canada's spaces and species.

1. How much of South America's rainforest remains?  
a) 85% b) 23% c) 52%
2. In comparison, how much of Canada's west coast rainforest is undisturbed?  
a) 25% b) 65% c) 3%
3. What percent of Canada's tall-grass prairie remains?  
a) 11% b) 25% c) 1%
4. What are the biggest threats to built heritages (e.g., buildings, statues) in Canada?  
a) air pollution b) neglect c) development  
d) vandalism e) weather f) water action  
g) all of the foregoing
5. By 1993, how many Canadian species, including plants and animals, were officially listed as "at risk"?  
a) 147 b) 236 c) 11
6. What is the single biggest reason for wildlife problems in Canada?  
a) over-hunting b) pollution c) loss of habitat  
d) acid rain
7. True or false? Special neighbourhoods and places you treasured as a child have been drastically altered by development.
8. Name four symbols of Canadian identity.

**Answers to Sample Assessment Items**

1. a) 85%  
*The real issue in South America is that these rainforests are incredibly rich and diverse. It is estimated that 90% of the world's species are found there. We are losing species we haven't even discovered yet.*
2. c) 3%
3. c) 1%  
*Tall-grass prairie in Canada is pretty well confined to southern Manitoba. Almost all of the original prairie grassland has been converted to other uses.*
4. g) all of the foregoing
5. b) 236  
*The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) compiles an annual list. The total list includes plants and animals that are endangered, threatened or rare, as well as those that are gone from Canada because they are extinct or extirpated. However there are many species, such as insects, about which we have no information.*
6. c) loss of habitat
7. No surveys have been done on this subject. The question is intended to get you reflecting for a moment on how your world has changed. Perhaps you can think of something you valued that has disappeared.
8. No right or wrong answers. What we value depends on our age, interest, and regional or cultural background. But Canadians often mention some of the same things: the maple leaf, our anthem (O Canada), the Rockies, the Parliament Buildings, the beaver, the Canadian flag, hockey, loons—a mix of cultural and natural heritage.

**STANDARD: Response indicating 80% mastery.**

**KNOWLEDGE/APPLICATION ASSESSMENT: Endangered Spaces and Species**

WLD2040-3

**Assessment Criteria and Conditions:**

- identifying and explaining:
  - the roles of the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and the Canadian Register of Heritage Properties (CRHP)
  - the five categories of species at risk in Canada
  - methods used to identify spaces at risk in Canada.

**Suggested Reference(s):**

- The Nature of Canada: A Primer on Spaces and Species*
- Project Wild*

**STANDARD:** Respond to a minimum standard of 2 on the rating scale

**Rating Scale***The student:*

- met project/task objectives in a self-directed manner. Provided explanations and critical judgements based on a superior knowledge base. Demonstrated an understanding of relevant concepts and related issues.
- met project/task objectives in a self-directed manner. Provided explanations and comparisons of relevant concepts using precise terminology. Required little or no prompting.
- met project/task objectives with limited assistance in planning and in the selection and use of resources. Applied knowledge of concepts in different situations using correct terminology. Required occasional prompting.
- completed task as directed, demonstrating basic skills/completeness by following a guided course of action. Used simple recall to demonstrate basic knowledge of concepts. Required prompting.
- did not complete task, or was unable to provide a suitable response.

N/A Not applicable

**Assessment Tools**

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Background Information	Sample Questions/Activities
<p>See <i>The Nature of Canada: A Primer on Spaces and Species</i>:</p> <p>Chapter 5 – <u>The Changing Nature of Canada's Spaces and Species</u></p> <p>Q70: What is happening to the nature of Canada?</p> <p>Q71: Why should we be concerned?</p> <p>Q74: What are "endangered spaces"?</p> <p>Q75: Why are natural spaces disappearing?</p> <p>Q77: What are "endangered species"?</p> <p>Q78: Why are species disappearing?</p> <p>Q79: How serious is the situation in Canada?</p> <p>Chapter 6 – <u>The 100 Per Cent Solution</u></p> <p>Q83: What is the "100 per cent solution"?</p> <p>Q84: Why is 12 per cent the target for protected areas?</p> <p>Q86: What are "protected natural areas"?</p> <p>Q89: What are "representative" protected areas?</p> <p>Q90: What are "critical wildlife areas"?</p> <p>Q92: Is setting aside protected areas enough?</p> <p>Chapter 7 – <u>Programs for Protection and Stewardship</u></p> <ul style="list-style-type: none"> <li>Research for the Protection of Spaces and Species</li> <li>Identifying Spaces and Species</li> <li>Protecting Biodiversity</li> <li>Protecting Ecosystem Diversity</li> <li>Protecting Critical Wildlife Habitat</li> </ul>	<p><b>1. Explain how societal actions have caused wildlife spaces and species to become threatened or endangered; e.g.:</b></p> <ul style="list-style-type: none"> <li>human population growth</li> <li>resource extraction</li> <li>deforestation</li> <li>pollution.</li> </ul> <p><b>2. What do we mean when we say a space or species is "at risk"?</b></p> <p><b>3. What factors/criteria are used to determine if a space or species is at risk in Canada?</b></p> <p><b>4. Explain the roles of agencies established to identify spaces and species at risk in Canada; e.g.:</b></p> <ul style="list-style-type: none"> <li>Committee on the Status of Endangered Wildlife in Canada (COSEWIC)</li> <li>Canadian Register of Heritage Properties (CRHP).</li> </ul> <p><b>5. Explain and give examples of different types of spaces at risk in Canada; e.g.:</b></p> <ul style="list-style-type: none"> <li>threatened natural areas</li> <li>areas essential to the functioning of the biosphere</li> <li>areas essential to the survival of a particular species</li> <li>cultural heritage sites.</li> </ul> <p><b>6. Define and give examples of the five categories of species at risk in Canada; e.g.:</b></p> <ul style="list-style-type: none"> <li>vulnerable</li> <li>threatened</li> <li>endangered</li> <li>extirpated</li> <li>extinct.</li> </ul>

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**KNOWLEDGE/APPLICATION ASSESSMENT: Wildlife Management Programs**

**WLD2040-4**

**Assessment Criteria and Conditions:**

- identifying and comparing roles, responsibilities and strategies relevant to two local, two national and two international programs currently implemented to protect spaces and species.

**Suggested Reference(s):**

- The Nature of Canada: A Primer on Spaces and Species*
- Project Wild*

**STANDARD:** Respond to a minimum standard of 2 on the rating scale

**Rating Scale**

*The student:*

- meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
- meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- does not complete task, or is unable to provide a suitable response.

N/A Not applicable

Background Information	Sample Questions/Activities
<p>See <i>The Nature of Canada: A Primer on Spaces and Species</i>:</p> <p>Chapter 6 – The 100 Per Cent Solution</p> <p>Q87: Who creates protected natural areas?</p> <p>Q91: What role do nongovernmental organizations play in protecting areas?</p> <p>Q101: What is being done to restore degraded ecosystems?</p> <p>Q102: What is being done to recover specific wildlife species?</p> <p>Chapter 7 – Programs for Protection and Stewardship</p> <ul style="list-style-type: none"> <li>Research for the Protection of Spaces and Species</li> <li>Identifying Spaces and Species</li> <li>Protecting Biodiversity</li> <li>Protecting Ecosystem Diversity</li> <li>Protecting Both Natural and Cultural Heritage</li> <li>Protecting Critical Wildlife Habitat</li> <li>Promoting Stewardship of Spaces and Species</li> </ul>	<ol style="list-style-type: none"> <li>Provide one or more examples of each of the following in managing ecosystems at local, national and/or international levels: <ul style="list-style-type: none"> <li>parks</li> <li>wildlife and wilderness areas</li> <li>migratory bird sanctuaries</li> <li>ecological reserves</li> <li>world heritage sites</li> <li>private landowners</li> <li>grazing reserves.</li> </ul> </li> <li>Outline the mandates, roles and responsibilities of two local programs (that receive support by government, industry, environmental and/or other community organizations) underway to protect spaces and species.</li> <li>Outline the mandates, roles and responsibilities of two national programs (that receive support by government, industry, environmental and/or other community organizations) underway to protect spaces and species.</li> <li>Outline the mandates, roles and responsibilities of two international programs (that receive support by government, industry, environmental and/or other community organizations) underway to protect spaces and species.</li> <li>Compare one or more aspects of Canadian policy/philosophy regarding wildlife management with that of another nation regarding similar issues.</li> </ol>



**KNOWLEDGE/APPLICATION ASSESSMENT: Human Interaction with Wildlife****WLD2060-1****Assessment Criteria and Conditions:**

- identifying and explaining three or more situations where changes in human populations have resulted in subsequent changes in wildlife (e.g., number, behaviour, habitat).

**Suggested Reference(s):**

- The Nature of Canada: A Primer on Spaces and Species*
- A Primer on Environmental Citizenship*
- Project Wild*

**STANDARD: Respond to a minimum standard of 2 on the rating scale**

**Rating Scale**

*The student:*

- meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
- meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- does not complete task, or is unable to provide a suitable response.

N/A Not applicable

Background Information	Sample Questions/Activities
<p>See <i>A Primer on Environmental Citizenship</i>. Section 2: Humans and Their Environment:</p> <p><u>A Changing Relationship</u> Q2.70: Are there ways to gauge the scale at which human activity affects the environment? Q2.71: What has caused the increase in the environmental impact of our species?</p> <p><u>Population</u> Q2.84: Is population growth really an environmental issue? Q2.85: Are there other factors that determine environmental impact?</p> <p><u>Technology</u> Q2.93: Does technological change pose a threat to human society and the environment? Q2.94: What technological changes have had the greatest impact on modern society and its natural environment?</p> <p><u>Economy</u> Q2.102: What are the economic reasons for environmental degradation? Q2.103: Why are environmental resources sometimes undervalued?</p> <p><u>Resource Use</u> Q2.111: What are some of the environmental concerns associated with the harvesting of renewable resources? Q2.115: What are the environmental concerns associated with the use of nonrenewable and nonreplenishable resources?</p>	<p><b>1. How has wildlife affected the development, movement and size of human societies?</b> e.g.: – historical development – aboriginal settlement.</p> <p><b>2. Provide a personal interpretation of three or more situations where changes in human populations have resulted in subsequent changes in the number, behaviour or habitat of wildlife; e.g.:</b> – urbanization – dam construction – hunting/fishing – agriculture practices – transportation corridors – recreation and tourism – resource extraction.</p> <p><b>3. How have human populations affected wildlife and its habitat in your community?</b> e.g.: – changes in distribution, diversity and/or abundance – changes in habitat.</p> <p><b>4. Explain “habitat fragmentation.” Identify three or more local wildlife species affected by this phenomenon.</b></p>

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**RESEARCH PROCESS: Impacts of Technology/Land Use****WLD2060-2**

TASK	OBSERVATION/RATING			
Preparation and Planning	4	3	2	1 0 N/A
Information Gathering and Processing	4	3	2	1 0 N/A
Content	4	3	2	1 0 N/A
Collaboration and Teamwork	4	3	2	1 0 N/A
Information Sharing	4	3	2	1 0 N/A

**STANDARD IS 2 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
  - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
  - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
  - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
  - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**TASK CHECKLIST***The student:***Preparation and Planning**

- ☐ sets goals and establishes steps to achieve them
- ☐ creates and adheres to useful timelines
- ☐ uses personal initiative to formulate questions and find answers
- ☐ plans and uses time effectively

**Information Gathering and Processing**

- ☐ accesses a range of relevant in-school/community resources

- ☐ uses a range of information-gathering techniques
- ☐ interprets, organizes and combines information into a logical sequence

- ☐ records information accurately with appropriate supporting detail and using correct technical terms
- ☐ determines accuracy/currency/reliability of information sources
- ☐ gathers and responds to feedback regarding approach to the task

**Content**

- ☐ identifies and describes one technology or land use practice that influences wildlife and/or habitat
- ☐ explains applications of the technology or land use practice; e.g.:
  - agriculture/forestry
  - energy/mining
  - tourism/recreation

**Content (continued)**

- ☐ provides a drawing/illustration of the technology or land use practice
- ☐ identifies wildlife spaces/species affected by the technology or land use practice, and interactions of the technology/land use with wildlife/habitat
- ☐ provides a balance sheet of positive and negative affects of the technology/land use on wildlife and habitat; e.g.:
  - food production/habitat loss
  - employment gains/species extinction
- ☐ summarizes the benefits and costs of the technology or land use practice for wildlife and society

**Collaboration and Teamwork**

- ☐ cooperates with group members
- ☐ shares work appropriately among group members
- ☐ negotiates solutions to problems

**Information Sharing**

- ☐ demonstrates effective use of two or more communication media:
  - e.g., written, oral, audio-visual
- ☐ communicates ideas in a logical sequence with sufficient supporting detail
- ☐ maintains acceptable grammatical and technical standards
- ☐ cites five or more relevant information sources

**REFLECTIONS/COMMENTS:**

**KNOWLEDGE/APPLICATION ASSESSMENT: Comparing Wildlife Management Plans**

WLD2060-3

**Assessment Criteria and Conditions:**

- a comparison of two existing wildlife management plans with respect to:
  - goals
  - approaches taken
  - outcomes and accomplishments.

**Suggested Reference(s):**

- *The Nature of Canada: A Primer on Spaces and Species*
- *Project Wild*

**STANDARD: Respond to a minimum standard of 2 on the rating scale**

**Rating Scale**

*The student:*

- 4 meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- 3 meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
- 2 meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- 1 completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- 0 does not complete task, or is unable to provide a suitable response.

N/A Not applicable

**Assessment Tools**

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Background Information	Sample Questions/Activities
<p>See <i>The Nature of Canada: A Primer on Spaces and Species</i>, Chapter 7: Programs for Protection and Stewardship.</p> <p>There are more than 120 programs underway across Canada to protect spaces and species. This chapter describes some of the national and international programs developed to:</p> <ul style="list-style-type: none"> <li>• support research for the protection of spaces and species</li> <li>• identify spaces and species</li> <li>• protect biodiversity</li> <li>• protect ecosystem diversity</li> <li>• protect both natural and cultural heritage</li> <li>• protect historic places</li> <li>• protect critical wildlife habitat</li> <li>• promote stewardship of spaces and species.</li> </ul> <p>See also <i>The Nature of Canada: A Primer on Spaces and Species</i>, Appendix A: Directory of Government and Non-Government Organizations.</p>	<p><b>1. Gather information regarding two existing wildlife management plans; e.g.:</b></p> <ul style="list-style-type: none"> <li>– North American Waterfowl Management plan</li> <li>– Peregrine Falcon Recovery Plan</li> <li>– Swift Fox Rehabilitation Project.</li> </ul> <p><b>2. Explain and compare the two wildlife management plans with respect to goals and objectives.</b></p> <p><b>3. Explain and compare the approaches taken/ techniques used in each management plan; e.g.:</b></p> <ul style="list-style-type: none"> <li>– legislation and policy</li> <li>– incentives</li> <li>– education</li> <li>– demonstration</li> <li>– land use planning.</li> </ul> <p><b>4. Explain and compare the outcomes and accomplishments of each of the management plans; e.g.:</b></p> <ul style="list-style-type: none"> <li>– social</li> <li>– economic</li> <li>– environmental.</li> </ul>

**TASK CHECKLIST: Safe Handling of Bows, Arrows and Firearms****WLD 2070-1**

<b>BOWS AND ARROWS</b> (PERFORMANCE STANDARD IS 3 IN EACH TASK AREA)	
<b>The student:</b>	
<input type="checkbox"/>	conducts safety inspection of equipment: <input type="checkbox"/> string (e.g., signs of wear, proper installation on bow nocks) <input type="checkbox"/> limbs (e.g., check for cracks, twisted limbs, broken/splintered bow tips) <input type="checkbox"/> arrows (e.g., check for cracks and splinters, cracked/loose nocks, loose/broken points, fletching damage)
<input type="checkbox"/>	identifies situations where equipment repair or replacement is required <input type="checkbox"/> _____ <input type="checkbox"/> _____
<input type="checkbox"/>	identifies optional accessories available for archery; e.g.: <input type="checkbox"/> finger tabs <input type="checkbox"/> armguard <input type="checkbox"/> glove <input type="checkbox"/> _____
<input type="checkbox"/>	explains appropriate storage techniques for equipment used <input type="checkbox"/> _____ <input type="checkbox"/> _____
<input type="checkbox"/>	demonstrates safe bow handling techniques; e.g.: <input type="checkbox"/> stringing <input type="checkbox"/> marking the nocking point <input type="checkbox"/> observing range rules

<input type="checkbox"/>	demonstrates archery fundamentals; e.g.: <input type="checkbox"/> identifying the master/dominant eye <input type="checkbox"/> stance (e.g., regular, oblique) <input type="checkbox"/> gripping <input type="checkbox"/> nocking (e.g., recognize cock feather, placement of nock on bow string) <input type="checkbox"/> draw and anchor (e.g., anchor point) <input type="checkbox"/> aim (e.g., use of bow sights, point of aim, recognition of safe target and surroundings) <input type="checkbox"/> release <input type="checkbox"/> follow through
<input type="checkbox"/>	recognizes common errors and identifies how they can be corrected; e.g.: <input type="checkbox"/> high <input type="checkbox"/> low <input type="checkbox"/> right <input type="checkbox"/> left <input type="checkbox"/> high and right <input type="checkbox"/> low and left
<input type="checkbox"/>	

<b>FIREARMS</b> (PERFORMANCE STANDARD IS 3 IN EACH TASK AREA)	
<b>The student:</b>	
<input type="checkbox"/>	describes the evolution of the modern firearm; e.g.: <input type="checkbox"/> black powder <input type="checkbox"/> modern firearm

<input type="checkbox"/>	identifies basic parts of firearms and their operation; e.g.: <input type="checkbox"/> stock <input type="checkbox"/> action <input type="checkbox"/> barrel
<input type="checkbox"/>	explains characteristics of firearms; e.g.: <input type="checkbox"/> rifling <input type="checkbox"/> calibre <input type="checkbox"/> shotgun gauge <input type="checkbox"/> shotgun choke
<input type="checkbox"/>	explains basic types of actions used to classify firearms; e.g.: <input type="checkbox"/> bolt <input type="checkbox"/> pump <input type="checkbox"/> lever <input type="checkbox"/> hinge <input type="checkbox"/> semi-automatic
<input type="checkbox"/>	explains different types of safety devices used on firearms; e.g.: <input type="checkbox"/> slide <input type="checkbox"/> button
<input type="checkbox"/>	explains types of sights on firearms; e.g.: <input type="checkbox"/> open <input type="checkbox"/> aperture <input type="checkbox"/> scope <input type="checkbox"/> bead
<input type="checkbox"/>	describes the basic components of rifle and shotgun ammunition; e.g.: <input type="checkbox"/> centrefire <input type="checkbox"/> rimfire <input type="checkbox"/> shotshell
<input type="checkbox"/>	illustrates selection of firearm and ammunition for appropriate game or intended use



## TASK CHECKLIST: Safe Handling of Bows, Arrows and Firearms (continued)

WLD 2070-1

## FIREARMS (continued)

## (PERFORMANCE STANDARD IS 3 IN EACH TASK AREA)

*The student:*

- ☐ explains the key concerns related to the acquisition of firearms; e.g.:
- ☐ new (e.g., manufacturer's warranty)
  - ☐ used (e.g., inspection by certified gunsmith)
- ☐ explains appropriate techniques for the care of firearms in the field; e.g.:
- ☐ checking for obstruction
  - ☐ operating safety
  - ☐ general cleanliness
- ☐ explains appropriate techniques for maintaining firearms; e.g.:
- ☐ periodic cleaning/maintenance
  - ☐ thorough cleaning prior to storage
- ☐ explains appropriate techniques for storing firearms; e.g.:
- ☐ locking separate from ammunition
  - ☐ vault
  - ☐ trigger lock or cable lock
  - ☐ bolt removal
- ☐ explains basic principles of safe rifle and shotgun handling; e.g.:
- ☐ controlling muzzle
  - ☐ treating firearm as if loaded
  - ☐ keeping action open
  - ☐ selecting correct ammunition
  - ☐ focusing on target and beyond
  - ☐ refraining from the use of alcohol/drugs
  - ☐ being aware of fatigue
  - ☐ making firearms safe while travelling

- ☐ explains safe procedures for the use of firearms in the field; e.g.:
- ☐ muzzle control
  - ☐ use of safety device
  - ☐ finger outside trigger guard
  - ☐ crossing fences or barriers

- ☐ explains techniques for the safe loading and sighting of a firearm; e.g.:
- ☐ checking data stamp against ammunition
  - ☐ stance and shooting position
  - ☐ mount and positioning
  - ☐ aim
  - ☐ trigger control
  - ☐ breath control
  - ☐ follow through

- ☐ explains appropriate range procedure for recreational shooting activities; e.g.:
- ☐ novelty shooting
  - ☐ regulation shooting (e.g., trap, skeet, silhouette, target)

- ☐ explains range procedures relevant to a specific club; e.g.:
- ☐ procedure while on the firing line
  - ☐ instructions to load
  - ☐ instructions for cease fire

**Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**REFLECTIONS/COMMENTS**

**TASK CHECKLIST: Field Techniques****WLD2070-2**

<b>VISUAL ACUITY AND PHYSICAL STRENGTH (PERFORMANCE STANDARD IS 2 IN EACH TASK AREA)</b>	
<i>The student:</i>	
<input type="checkbox"/> describes the importance of visual acuity	
<input type="checkbox"/> conducts an assessment of personal visual ability; e.g.: <ul style="list-style-type: none"><li><input type="checkbox"/> distance and nearpoint vision</li><li><input type="checkbox"/> depth perception</li><li><input type="checkbox"/> peripheral vision</li><li><input type="checkbox"/> colour vision</li><li><input type="checkbox"/> binocular coordination</li></ul>	
<input type="checkbox"/> identifies factors that affect visual perception; e.g.: <ul style="list-style-type: none"><li><input type="checkbox"/> lighting (dusk/dawn, light/shadow)</li><li><input type="checkbox"/> atmospheric conditions (rain, snow)</li><li><input type="checkbox"/> cover type (heavy vegetation)</li><li><input type="checkbox"/> snow cover/sun reflection</li></ul>	
<input type="checkbox"/> identifies strategies for improving vision in outdoor environments; e.g.: <ul style="list-style-type: none"><li><input type="checkbox"/> corrective lenses</li><li><input type="checkbox"/> sunglasses (tinted, polarized)</li><li><input type="checkbox"/> optical instruments (binoculars, spotting scope)</li></ul>	

<input type="checkbox"/> explains the role of physical conditioning in safe outdoor experiences; e.g.: <ul style="list-style-type: none"><li><input type="checkbox"/> endurance</li><li><input type="checkbox"/> stamina</li></ul>	
<input type="checkbox"/> explains the importance of recognizing personal limitations relevant to endurance and stamina in outdoor experiences	
<input type="checkbox"/>	
<input type="checkbox"/>	

<input type="checkbox"/> identifies and explains all safety criteria relevant to taking aim; e.g.: <ul style="list-style-type: none"><li><input type="checkbox"/> correct identification of target</li><li><input type="checkbox"/> proper backstop</li><li><input type="checkbox"/> safe impact zone</li></ul>	
<input type="checkbox"/>	
<input type="checkbox"/>	

<b>HANDLING AND DRESSING GAME ANIMALS (PERFORMANCE STANDARD IS 2 IN EACH TASK AREA)</b>	
<i>The student:</i>	
<input type="checkbox"/> explains techniques for dressing big game animals in the field	
<input type="checkbox"/> explains techniques for skinning big game animals; e.g.: <ul style="list-style-type: none"><li><input type="checkbox"/> antlered and horned animals</li><li><input type="checkbox"/> non-trophy animals</li><li><input type="checkbox"/> trophy animals</li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> bears, wolves, coyotes, cougars</li></ul>

<b>TARGETING (PERFORMANCE STANDARD IS 3 IN EACH TASK AREA)</b>	
<i>The student:</i>	
<input type="checkbox"/> explains the importance of safe and accurate targeting of big game and bird game	
<input type="checkbox"/> identifies vital target areas and targeting techniques for big game	
<input type="checkbox"/> identifies vital target areas and targeting techniques for bird game	

HANDLING AND DRESSING GAME ANIMALS (continued) (PERFORMANCE STANDARD IS 2 IN EACH TASK AREA)	
<i>The student:</i>	
<input type="checkbox"/> explains techniques for hanging and cooling the carcass of a big game animal	
<input type="checkbox"/> explains techniques for preserving the hides and capes of big game	
<input type="checkbox"/> explains techniques for transporting game from field to camp	
<input type="checkbox"/> explains techniques for butchering big game	
<input type="checkbox"/> explains techniques for skinning, plucking and cleaning game birds	
<input type="checkbox"/> explains techniques for cooling and transporting game birds	
<input type="checkbox"/> explains techniques for the care of trophy game birds	
<input type="checkbox"/> explains techniques for dressing and handling rabbits in the field	
<input type="checkbox"/>	
<input type="checkbox"/>	

**Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

**REFLECTIONS/COMMENTS**

# RESEARCH PROCESS: Personal and Legal Responsibilities

WLD2070-3

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0
Information Gathering and Processing	4	3	2	1	0
Content	4	3	2	1	0
Collaboration and Teamwork	4	3	2	1	0
Information Sharing	4	3	2	1	0

## STANDARD IS 2 IN EACH APPLICABLE TASK

### Rating Scale

*The student:*

- exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

TASK CHECKLIST		Content (continued)
<i>The student:</i>		<input type="checkbox"/> identifies and interprets federal, provincial and/or municipal laws and regulations intended to protect and conserve wildlife; e.g.: <ul style="list-style-type: none"> <li>– hunting season/species</li> <li>– gender identification/maturity/bag limits</li> <li>– management units</li> </ul>
<b>Preparation and Planning</b>		<input type="checkbox"/> identifies and interprets federal, provincial and/or municipal laws and regulations intended to govern behaviour of a sports person; e.g.: <ul style="list-style-type: none"> <li>– use of bows/arrows/firearms</li> <li>– “use respect” protocol</li> </ul>
<b>Information Gathering and Processing</b>		<input type="checkbox"/> explains responsibilities of the sports person and procedures to follow in reporting violations of the law and biological data to appropriate officials; e.g.: <ul style="list-style-type: none"> <li>– “TIPS”</li> <li>– “Report a Poacher”</li> </ul>
<b>Collaboration and Teamwork</b>		<input type="checkbox"/> cooperates with group members <input type="checkbox"/> shares work appropriately among group members <input type="checkbox"/> negotiates solutions to problems
<b>Information Sharing</b>		<input type="checkbox"/> demonstrates effective use of two or more communication media: e.g., <i>written, oral, audio-visual</i> <input type="checkbox"/> communicates ideas in a logical sequence with sufficient supporting detail <input type="checkbox"/> maintains acceptable grammatical and technical standards <input type="checkbox"/> cites five or more relevant information sources
<b>Content</b>		<input type="checkbox"/> identifies and interprets federal, provincial and/or municipal laws and regulations intended to protect life and property; e.g.: <ul style="list-style-type: none"> <li>– safety of self and others</li> <li>– trespassing</li> <li>– access to public lands</li> </ul>

### RESOURCES:

- *Migratory Game Bird Act*
- *National Parks Act and Regulations*
- *Fisheries Act of Alberta*
- *Alberta Wildlife Act*
- *Alberta Hunting Regulations*



**CRITERIA FOR SUMMARIZING WILDLIFE ISSUES****WLD2090-1**

<b>WILDLIFE ISSUE</b>	<b>Statement of Issue</b>	<b>Related Positions/Stakeholders</b>	<b>Contributing Factors</b>	<b>Consequences for Humans/Wildlife</b>	<b>Actions Being Taken</b>
<b>Issue #1:</b>	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0
<b>Issue #2:</b>	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0
<b>Issue #3:</b>	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0
<b>Issue #4:</b>	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0
<b>Issue #5:</b>	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0	4 3 2 1 0

**STANDARD:** Summarize 5 current wildlife issues to a standard of 2 on the rating scale; each summary to address criteria identified above.

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

**Assessment Tools**

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**SAMPLE ISSUE: Protection of Wolf Populations**

**Statement of the Issue**

Some ranchers, stock growers and hunters do not want wolves protected because they prey on livestock and ungulates.

**Related Positions/Stakeholders**

Conservationists would advocate for total protection of wolves in order to re-establish natural populations. Wildlife managers need to ensure the well-being and survival of wolf populations.

**Contributing Factors**

Wolves prey on livestock and ungulates. Some humans perceive wolves as a threat. As a large predator, wolves are an important part of the ecosystem.

**Consequences for Humans/Wildlife**

There is a loss in agriculture revenue when livestock are preyed upon by wolves. Where wolf numbers are high, some ungulate populations are declining. Some wolf populations have been eliminated through hunting, trapping and poisoning.

**Actions Being Taken**

Wolves have been reintroduced into some regions. Liberal hunting and trapping policies exist in areas where wolf populations are high. Compensation is sometimes given to landowners for livestock lost to wolves.

**SAMPLE WILDLIFE ISSUES**

**WLD2090-2**

<b>CATEGORY</b>	<b>Alberta</b>	<b>Canada</b>	<b>Global</b>
<b>Habitat Loss/Manipulation</b>	<ul style="list-style-type: none"> <li>• Urbanization</li> <li>• Grizzly Bear</li> <li>• Agriculture</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Urbanization</li> <li>• Prairie Grassland</li> <li>• Swift Fox</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Urbanization</li> <li>• Rainforest</li> <li>• Wetland Drainage</li> <li>•</li> </ul>
<b>Introduction of Non-native Species</b>	<ul style="list-style-type: none"> <li>• Starlings/Sparrows</li> <li>• Suffield Horses</li> <li>•</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Water Milfoil</li> <li>• Thistle</li> <li>• Purple Loosestrife</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Norway Rats</li> <li>•</li> <li>•</li> <li>•</li> <li>•</li> </ul>
<b>Hunting and Commercial Trade</b>	<ul style="list-style-type: none"> <li>• Antlers/Horns</li> <li>• Bear Gallbladders</li> <li>• Filling Wetlands</li> </ul>	<ul style="list-style-type: none"> <li>• Antlers/Horns</li> <li>• Bear Gallbladders</li> <li>• Seals/Salmon/Cod</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Antlers/Horns</li> <li>• Bear Gallbladders</li> <li>• Fur Clothing</li> <li>•</li> </ul>
<b>Industrial Development</b>	<ul style="list-style-type: none"> <li>• Dams and Reservoirs</li> <li>• Clearcut Logging</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Great Lakes</li> <li>• Arctic Pipelines</li> <li>•</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Oil Spills</li> <li>• Logging Rainforests</li> <li>•</li> <li>•</li> </ul>
<b>Pollution</b>	<ul style="list-style-type: none"> <li>• Power Plants</li> <li>• Use of Pesticides</li> <li>•</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Chemicals in Water Supply</li> <li>•</li> <li>•</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• Use of DDT</li> <li>• Rivers/Water Systems</li> <li>•</li> <li>•</li> </ul>
<b>Conservation/Preservation</b>	<ul style="list-style-type: none"> <li>• Bow Valley Corridor</li> <li>• Alberta Provincial Parks</li> <li>•</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• National Parks</li> <li>• Arctic Ecosystem</li> <li>•</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• World Heritage Areas</li> <li>•</li> <li>•</li> <li>•</li> </ul>

**RESEARCH PROCESS: Issues in Wildlife**

WLD2090-3

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0 N/A
Information Gathering and Processing	4	3	2	1	0 N/A
Content	4	3	2	1	0 N/A
Collaboration and Teamwork	4	3	2	1	0 N/A
Information Sharing	4	3	2	1	0 N/A

**STANDARD IS 2 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**TASK CHECKLIST***The student:*

- Preparation and Planning**
- ☐ sets goals and establishes steps to achieve them
  - ☐ creates and adheres to useful timelines
  - ☐ uses personal initiative to formulate questions and find answers
  - ☐ plans and uses time effectively

**Information Gathering and Processing**

- ☐ accesses a range of relevant in-school/community resources
- ☐ uses a range of information-gathering techniques
- ☐ interprets, organizes and combines information into a logical sequence
- ☐ records information accurately with appropriate supporting detail and using correct technical terms

- ☐ determines accuracy/currency/reliability of information sources
- ☐ gathers and responds to feedback regarding approach to the task

**Content**

- ☐ identifies and explains one local or national wildlife issue
- ☐ explains the impact of the issue on wildlife, humans and/or the environment

**Content (continued)**

- ☐ identifies stakeholders involved, and the viewpoints of each stakeholder group
- ☐ identifies different philosophies, ethics and alternatives regarding the issue
- ☐ states a personal position regarding the issue and a rationale for the position taken
- ☐ compares and contrasts the issue with a related wildlife issue in another part of the world

**Collaboration and Teamwork**

- ☐ cooperates with group members
- ☐ shares work appropriately among group members
- ☐ negotiates solutions to problems

**Information Sharing**

- ☐ demonstrates effective use of two or more communication media:  
*e.g., written, oral, audio-visual*
- ☐ communicates ideas in a logical sequence with sufficient supporting detail
- ☐ maintains acceptable grammatical and technical standards
- ☐ cites five or more relevant information sources

**REFLECTIONS/COMMENTS:**

**KNOWLEDGE/APPLICATION ASSESSMENT: Wildlife and the Arts****WLD3020-1****Assessment Criteria and Conditions:**

- identifying and explaining one or more human-wildlife relationships expressed through each of the following: art, literature, dance, music and drama.

**Suggested Reference(s):**

- The Nature of Canada: A Primer on Spaces and Species*
- Project Wild*

**STANDARD: Respond to a minimum standard of 3 on the rating scale**

**Rating Scale**

*The student:*

- meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
- meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- does not complete task, or is unable to provide a suitable response.

N/A Not applicable

Background Information	Sample Questions/Activities
<p>See <i>The Nature of Canada: A Primer on Spaces and Species</i>, Chapter 3: The Cultural Heritage Perspective:</p> <p><u>People, Culture and the Environment</u>            Q42: How does the environment affect culture?            Q43: How does culture affect the environment?            Q44: What does studying people have to do with the environment?            Q45: How do we learn about people?</p> <p><u>History</u>            Q46: How do we learn about the past?            Q47: But isn't history just about wars and inventions?            Q48: How can history help us protect our environment in the future?</p> <p><u>Heritage</u>            Q51: What's the difference between "history" and "heritage"?            Q52: Then heritage is more than buildings?            Q54: If we want to preserve heritage, can't we just take photos and videos?            Q55: Can the concept of integrity apply to cultural heritage?</p>	<p><b>1. Examine differing cultural views regarding wildlife; e.g.:</b></p> <ul style="list-style-type: none"> <li>aesthetic/spiritual</li> <li>consumptive</li> <li>recreational</li> <li>environmental.</li> </ul> <p><b>2. Visit cultural/natural museums and take note of past/present influences of wildlife on cultures and societies; e.g.:</b></p> <ul style="list-style-type: none"> <li>food, clothing and shelter</li> <li>spiritual and aesthetic</li> <li>medicinal</li> <li>recreational</li> <li>companionship.</li> </ul> <p><b>3. Identify one or more human-wildlife relationships expressed through each of the following:</b></p> <ul style="list-style-type: none"> <li>art</li> <li>literature</li> <li>dance</li> <li>music</li> <li>drama.</li> </ul> <p><b>4. Based on your review of human-wildlife relationships expressed through the arts, cite instances where social/cultural attitudes and values regarding wildlife have changed.</b></p>



**CRITERIA FOR EVALUATING WRITTEN COMPOSITIONS**

WLD3020-2

<p><b>Guidelines for Writing the Composition</b></p> <p>Write a story or poem inspired by a painting, photograph or sculpture of a wildlife space or species. Consider the following statements/questions to help stimulate your ideas for writing.</p> <ol style="list-style-type: none"> <li>1. <u>Examine your subject.</u> <ul style="list-style-type: none"> <li>• What is your angle or focus on the subject? This may guide you in the development of ideas.</li> <li>• Define your subject. What exactly is it? What does it include?</li> <li>• Describe your subject. What is it like? Does it have parts? How is it similar to other subjects? How is it different from other subjects?</li> <li>• Why does your subject exist? What is its purpose? What does it do?</li> <li>• Why is your subject important? Is it necessary? Why is it worthy for you to write about?</li> </ul> </li> <li>2. <u>Consider your subject in relation to other things.</u> <ul style="list-style-type: none"> <li>• How did your subject develop? Where did it come from? Why does it do what it does?</li> <li>• What concrete/abstract ideas does your subject connect to? What does it affect? What affects it? How does it affect you?</li> <li>• Is your subject a part of something bigger? How? Is it composed of smaller parts? How?</li> <li>• Does your subject follow something else? What is it? What comes after your subject?</li> <li>• Does your subject have an opposite? How does this opposite affect your subject?</li> </ul> </li> <li>3. <u>Reflect on the value of your subject.</u> <ul style="list-style-type: none"> <li>• Does your subject have social value? How?</li> <li>• Does your subject have economic value? How?</li> <li>• Does your subject embody any constant truths or principles? What are they?</li> <li>• Why might others want to know about your subject? What meaning might it have for others?</li> </ul> </li> </ol>	<p><b>Criteria for Assessing the Composition</b></p> <p><b>Focus:</b> The topic is clearly defined; a controlling theme/idea is generally sustained.</p> <p><b>Content:</b> Creative, insightful and original ideas are used; the ideas are developed with supporting detail and relate to the topic.</p> <p><b>Imagery:</b> Precise, colourful words that communicate vivid pictures are used.</p> <p><b>Style:</b> The composition is clearly written and readily understood; a personal focus and distinct sense of individuality is established.</p> <p><b>Visual:</b> The composition is accompanied with a creative picture, photograph, drawing or painting of the subject.</p> <p><b>STANDARD IS 3 IS EACH TASK AREA</b></p> <p><b>Rating Scale</b></p> <p><i>The student:</i></p> <ol style="list-style-type: none"> <li>4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.</li> <li>3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.</li> <li>2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.</li> <li>1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.</li> <li>0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.</li> <li>N/A Not applicable</li> </ol>
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**RESEARCH PROCESS: Wildlife Management Programs****WLD3020-3**

TASK	OBSERVATIONS/RATING				
Preparation and Planning	4	3	2	1	0 N/A
Information Gathering and Processing	4	3	2	1	0 N/A
Content	4	3	2	1	0 N/A
Collaboration and Teamwork	4	3	2	1	0 N/A
Information Sharing	4	3	2	1	0 N/A

**STANDARD IS 3 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

TASK CHECKLIST	
<i>The student:</i>	
<b>Preparation and Planning</b>	<input type="checkbox"/> identifies scientific, technological and/or societal (e.g., political, social, economic) decisions and/or processes involved in the program <input type="checkbox"/> summarizes actions and strategies used in the program <input type="checkbox"/> identifies and compares the contributions of different interest groups <input type="checkbox"/> identifies and explains relevant laws, acts and agreements related to the program
<b>Information Gathering and Processing</b>	<input type="checkbox"/> sets clear goals and establishes steps to achieve them <input type="checkbox"/> creates and adheres to detailed timelines <input type="checkbox"/> uses personal initiative to formulate questions and find answers <input type="checkbox"/> plans and uses time effectively, prioritizing tasks on a consistent basis
<b>Collaboration and Teamwork</b>	<input type="checkbox"/> accesses a range of relevant information sources and recognizes when additional information is required <input type="checkbox"/> demonstrates resourcefulness in collecting data <input type="checkbox"/> interprets, organizes and combines information in creative and thoughtful ways <input type="checkbox"/> records information accurately with appropriate supporting detail and uses correct technical terms <input type="checkbox"/> recognizes underlying bias/assumptions/values in information sources <input type="checkbox"/> assesses and refines approach to the task and project status based on feedback and reflection
<b>Information Sharing</b>	<input type="checkbox"/> explains an existing program that enhances a wildlife space and/or species by identifying: <ul style="list-style-type: none"> <li>– goals and objectives of the program</li> <li>– the space(s)/species involved</li> <li>– impacts or consequences of the program</li> <li>– key interest groups involved</li> <li>– trade-offs or compromises made</li> </ul>
<b>Content</b>	<input type="checkbox"/> demonstrates effective use of a variety of communication media: <i>e.g., written, oral, audio-visual</i> <input type="checkbox"/> communicates thoughts/feelings/ideas clearly to justify or challenge a position <input type="checkbox"/> maintains acceptable grammatical and technical standards <input type="checkbox"/> provides evidence of adequate information gathering by citing relevant and current information sources
<b>Reflections/Comments:</b>	

## ASSESSMENT CRITERIA: Components of Scientific Research

WLD3040-1

### Introduction

This project involves the review of scientific research regarding a wildlife species and/or space as outlined in a current wildlife journal (e.g., *Canadian Journal of Zoology*, *Canadian Field Naturalist*, *Journal of Wildlife Management*, *Arctic*). You will be expected to identify major components of the research process as they apply to the space or species. Research components that must be identified include:

- definition of the problem
- review of relevant information sources
- a plan for collecting data
- data collection and presentation
- data analysis
- conclusions
- recommendations.

### Guidelines for Conducting the Review

1. After reviewing several articles regarding wildlife research, select one article concerning a research project of interest to you. Explain in your own words the **problem** or **question** that the research proposes to answer.
2. When conducting research, a biologist gathers relevant information available from other sources regarding the topic. As you read the article, notice the many references made to the work or ideas of others. List five or more different references made to the work or ideas of others in the article.
3. The **plan for collecting data** is usually found in the "methods" section of a research article. Find this section of the article and attempt to answer the following questions:
  - What specific data is being collected?
  - How is the data collected?
  - Where is the data collected?
  - When is the data collected?
  - How often is the data collected?
4. Researchers often graph or map data so as to more easily identify relationships between variables that may exist. Describe methods of **data presentation** and **data analysis** used in the research project. Explain how the methods employed are used to answer the "problem" or "question" under study.
5. Summarize **conclusions** that were presented in the article. Do the conclusions address the "problem" or "question" that was proposed?
6. Summarize the **recommendations** made regarding the research topic as a result of the data collected and conclusions reached.
7. Describe how the outcomes of research were summarized and communicated to the intended audience. Identify strengths of limitations in the **methods of communication** used.

### Assessment Tools

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### Criteria for Assessing the Review

Scoring Criteria	Weighting
<i>The student:</i>	
<input type="checkbox"/> defines the research problem	_____
<input type="checkbox"/> lists relevant sources of information	_____
<input type="checkbox"/> identifies/explains data collection techniques:	
– what?	_____
– how?	_____
– where?	_____
– when?	_____
– how often?	_____
<input type="checkbox"/> describes methods of data presentation/analysis	_____
<input type="checkbox"/> summarizes conclusions	_____
<input type="checkbox"/> summarizes recommendations made	_____

**STANDARD:** Identify all components and applications of scientific research to a standard of 3 on the rating scale.

### Rating Scale

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

CTS, Wildlife /G.87  
(1997)

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**ASSESSMENT CRITERIA: Defining Research Problems****WLD3040-2****Sample Research Topics**

- Eagle Migration
- Food Habits of Caribou
- Polar Bear Dens
- Human Disruption of Animal Migration
- Comparing Bird Beaks
- Zebra Mussels
- Purple Loosestrife
- Introduction of Biological Controls
- Wolf Management in National Parks
- Reintroduction of the Swift Fox
- Decomposition Rate of Carcasses by Maggots
- Development of Ski Hills/Trails
- Impacts of Clearcutting on Trout Streams
- Beaver Control and Wetlands
- Impacts of Energy Development on Wildlife
- Impacts of Icebreakers on Marine Mammals
- Rattlesnake Predation on Gophers
- Environmental Effects of Dam Development

**Guidelines for Defining the Research Problem***The student:*

1. poses a relevant question for research
2. defends the relevance of the topic and question
3. identifies three or more relevant information sources
4. limits the topic and question to a specific problem to be studied
5. clarifies the problem by identifying key components and relevant terms
6. defines the problem by way of a concise statement/objective for research.

**Criteria for Assessing the Research Problem**

Scoring Criteria	Weighting
<input type="checkbox"/> Statement of Topic and Question	_____
<input type="checkbox"/> Relevance of Topic and Question	_____
<input type="checkbox"/> Information Sources	_____
<input type="checkbox"/> Limitation to a Specific Problem	_____
<input type="checkbox"/> Clarification of the Problem	_____
<input type="checkbox"/> Statement/Objective for Research	_____

**STANDARD: Define five research problems to a standard of 3 on the rating scale.****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
  - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
  - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
  - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
  - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable



**SCIENTIFIC RESEARCH: Spaces and Species**

WLD3040-3

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0
Information Gathering and Processing	4	3	2	1	0
Collaboration and Teamwork	4	3	2	1	0
Conclusions and Information Sharing	4	3	2	1	0

**STANDARD IS 3 IN EACH APPLICABLE TASK**

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

**TASK CHECKLIST**

*The student:*

**Preparation and Planning**

- ☐ sets clear goals and establishes steps to achieve them
- ☐ creates and adheres to detailed timelines
- ☐ uses personal initiative to formulate questions and find answers
- ☐ defines and limits a problem or question regarding a wildlife space or species
- ☐ designs a plan for conducting research and collecting data related to the problem

**Information Gathering and Processing**

- ☐ accesses a range of relevant information sources (e.g., library, computer, interview) and recognizes when additional information is required
- ☐ collects baseline and specific data using appropriate information gathering techniques; e.g.:
  - samplings and surveys
  - observations
  - measurements and estimations
- ☐ interprets, organizes and combines data in creative and thoughtful ways
- ☐ analyzes and interprets data, relates data to the problem, and formulates further questions

**Collaboration and Teamwork**

- ☐ cooperates with group members
- ☐ shares work appropriately among group members
- ☐ negotiates solutions to problems
- ☐ displays effective communication and leadership skills

**Conclusions and Information Sharing**

- ☐ draws conclusions related to the problem; e.g.:
  - recommendations
  - management actions
  - further research and investigation
- ☐ shares the results of research using two or more communication media:
  - e.g., written, oral, audio-visual
- ☐ summarizes information relevant to each stage of scientific research; e.g.:
  - definition of the problem
  - literature review
  - data collection and presentation
  - data analysis
  - conclusions and recommendations
- ☐ maintains acceptable grammatical and technical standard in information shared
- ☐ gives evidence of adequate information gathering by citing current and relevant information sources used

**REFLECTIONS/COMMENTS**

**SAMPLE ASSESSMENT ITEMS: Wildlife Management**

**WLD3050-1**

<p><b>Wildlife Management Terms</b></p> <p>Match each term in Part B with the statement in Part A that describes it.</p> <p><b>Part A</b></p> <p>_____ the "home" of a species of wildlife within an ecosystem</p> <p>_____ the edges or borders of different habitats overlap each other</p> <p>_____ the ability of a given habitat to support or carry a population of particular species</p> <p>_____ changes in habitat that result in an increase or decrease in carrying capacity</p> <p>_____ motion or change within a population over time</p> <p>_____ as the survival of breeding populations increase, the survival of the offspring decreases</p> <p>_____ the end result of a successive biome community that is capable of self-perpetuation</p> <p>_____ a field of "applied ecology"</p> <p>_____ if one or more factors affecting the death rate decline, others will increase so that overall death rate will not significantly change</p> <p>_____ two or more species living in the same habitat</p> <p>_____ a reliable count or estimate of the population of a wildlife species</p> <p>_____ changing soil, water and plant conditions to accommodate a targeted species</p> <p>_____ techniques used to alter the abundance and distribution of game populations</p> <p>_____ the gradual change in population characteristics over a geographical area</p> <p>_____ functional role of a species in its habitat</p>	<p><b>Part B</b></p> <p>game management</p> <p>limiting factors</p> <p>wildlife inventory</p> <p>climax</p> <p>habitat</p> <p>carrying capacity</p> <p>Principle of Inversity</p> <p>niche</p> <p>wildlife manipulation</p> <p>habitat manipulation</p> <p>cline</p> <p>coexistence</p> <p>edge effect</p> <p>Principle of Compensation</p> <p>dynamics</p> <p>stability</p> <p>zone</p>	<p><u>Answers</u></p> <p>habitat</p> <p>edge effect</p> <p>carrying capacity</p> <p>limiting factors</p> <p>population dynamics</p> <p>Principle of Inversity</p> <p>climax</p> <p>game management</p> <p>Principle of Compensation</p> <p>coexistence</p> <p>wildlife inventory</p> <p>wildlife manipulation</p> <p>wildlife manipulation</p> <p>cline</p> <p>niche</p>
--	--	--

**Short Answer Quiz**

- |   |  |
|---|--|
| <ol style="list-style-type: none"><li>1. State and explain the <i>Principle of Inversity</i>.</li><li>2. Explain philosophical differences between conservation, preservation and wildlife management.</li><li>3. Explain the difference between extirpated and extinct species. Give examples of each.</li><li>4. Explain what the carrying capacity of an ecosystem means.</li><li>5. Management schemes for big game animals are varied. Name and describe three ways to manipulate the population of a big game animal.</li></ol> | <ol style="list-style-type: none"><li>6. Describe two management schemes that could be employed to increase browse habitat for big game animals such as moose or elk.</li><li>7. Describe two instances of habitat manipulation and the consequences of each for wildlife.</li><li>8. Explain techniques for conducting a wildlife inventory.</li><li>9. Assume that a sage grouse population is living in a small portion of southern Alberta. Identify and explain three limiting factors for populations of this game bird.</li><li>10. Identify and describe major components in a wildlife management plan.</li></ol> |
|---|--|

# KNOWLEDGE/APPLICATION ASSESSMENT: Components of Wildlife Management

WLD3050-2

## Assessment Criteria and Conditions:

- given information regarding a current plan for managing a wildlife space or species, identifying major components of the plan and applying each to the management of the space or species.

## Suggested Reference(s):

- The Nature of Canada: A Primer on Spaces and Species*
- Project Wild*

**STANDARD:** Respond to a minimum standard of 3 on the rating scale

## Rating Scale

*The student:*

- meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
  - meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
  - meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
  - completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
  - does not complete task, or is unable to provide a suitable response.
- N/A Not applicable

Background Information	Sample Questions/Activities
<p>See <i>The Nature of Canada: A Primer on Spaces and Species</i>, Chapter 7: Programs for Protection and Stewardship:</p> <p>Promoting Stewardship of Spaces and Species</p> <ul style="list-style-type: none"> <li>Wildlife Policy for Canada</li> <li>North American Waterfowl Management Plan</li> <li>Wildlife Habitat Canada</li> <li>Ducks Unlimited Canada</li> <li>Recovery of Nationally Endangered Wildlife</li> <li>Endangered Species Recovery Fund</li> <li>Heritage Canada</li> <li>Special Places 2000</li> </ul> <p>Obtain copies of current wildlife management plans. For example:</p> <ul style="list-style-type: none"> <li><i>North American Waterfowl Management plan</i></li> <li><i>Peregrine Falcon Recovery Plan</i></li> <li><i>Vermilion Lakes Area Plan</i></li> <li><i>Kootenay National Park Management Plan</i>.</li> </ul> <p>See <i>Prairie Conservation: A Landowner's Guide</i> for additional information regarding wildlife management plans.</p>	<p>1. Cite reasons for the establishment of a plan for managing a space or species; e.g.:</p> <ul style="list-style-type: none"> <li>types of information gathered</li> <li>questions that are answered.</li> </ul> <p>2. Identify political, social, economic, technological and/or scientific factors/perspectives that have influenced development of the management plan.</p> <p>3. Describe major components of the plan as they apply to managing the space or species; e.g.:</p> <ul style="list-style-type: none"> <li>goals and objectives</li> <li>data collection and research techniques</li> <li>government and nongovernment input</li> <li>alternatives, consequences and potential conflicts</li> <li>the course of action taken</li> <li>strategies for monitoring and assessing outcomes</li> <li>recommendations and/or suggested modifications.</li> </ul> <p>4. Develop a glossary of terms relevant to the wildlife management plan.</p>



**RESEARCH PROCESS: A Wildlife Management History****WLD3050-3**

TASK	OBSERVATIONS/RATING				
Preparation and Planning	4	3	2	1	0
Information Gathering and Processing	4	3	2	1	0
Content	4	3	2	1	0
Collaboration and Teamwork	4	3	2	1	0
Information Sharing	4	3	2	1	0

**STANDARD IS 3 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
  - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
  - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
  - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
  - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**TASK CHECKLIST***The student:***Preparation and Planning**

- ☐ sets clear goals and establishes steps to achieve them
- ☐ creates and adheres to detailed timelines
- ☐ uses personal initiative to formulate questions and find answers
- ☐ plans and uses time effectively, prioritizing tasks on a consistent basis

**Information Gathering and Processing**

- ☐ accesses a range of relevant information sources and recognizes when additional information is required
- ☐ demonstrates resourcefulness in collecting data
- ☐ interprets, organizes and combines information in creative and thoughtful ways
- ☐ records information accurately with appropriate supporting detail and using correct technical terms
- ☐ recognizes underlying bias/assumptions/values in information sources
- ☐ assesses and refines approach to the task and project status based on feedback and reflection

**Content**

- ☐ identifies reasons for managing a wildlife space or species; e.g.:
  - types of information gathered
  - questions that are answered
- ☐ identifies major political, social and/or economic decisions that have affected the management of the space or species from past to present

**Content (continued)**

- ☐ provides a historical account of the space or species; e.g.:
  - past and present status
  - government involvement and interest
- ☐ defines specific goals and objectives (past and present) of the management process
- ☐ provides a historical account of management strategies and tools that have been used
- ☐ identifies management outcomes, and relates these to original goals and objectives
- ☐ assesses management strategies and tools used from past to present in terms of:
  - usefulness in achieving desired goals and outcomes
  - impact on other spaces and/or species

**Collaboration and Teamwork**

- ☐ cooperates with group members
- ☐ shares work appropriately among group members
- ☐ negotiates with sensitivity solutions to problems
- ☐ displays effective communication and leadership skills

**Information Sharing**

- ☐ demonstrates effective use of a variety of communication media:
  - e.g., written, oral, audio-visual
- ☐ communicates thoughts/feelings/ideas clearly to justify or challenge a position
- ☐ maintains acceptable grammatical and technical standards
- ☐ gives evidence of adequate information gathering by citing seven or more relevant information sources

**REFLECTIONS/COMMENTS:**

**ISSUE ANALYSIS: Wildlife Management****WLD3050-4**

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0 N/A
Analyzing Perspectives	4	3	2	1	0 N/A
Collaboration and Teamwork	4	3	2	1	0 N/A
Evaluating Choices and Making Decisions	4	3	2	1	0 N/A

**STANDARD IS 3 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**TASK CHECKLIST***The student:***Preparation and Planning**

- ☐ accurately describes a current issue in wildlife management on which people disagree, explaining specific causes of disagreement
- ☐ poses thoughtful questions regarding the issue
- ☐ accesses a range of relevant information sources and recognizes when additional information is required
- ☐ demonstrates resourcefulness in collecting data

**Analyzing Perspectives**

- ☐ categorizes different points of view regarding the issue in wildlife management;  
*e.g., cultural, ethical, economic, environmental, health-related, scientific, political*
- ☐ states a position on the issue and insightful reasons for adopting that position
- ☐ states three or more opposing positions on the issue and thoughtful reasons for adopting each position
- ☐ analyzes interrelationships among different perspectives/points of view
- ☐ recognizes underlying bias/assumptions/values in information and ideas

**Collaboration and Teamwork**

- ☐ shares work appropriately among group members
- ☐ respects and considers the views of others
- ☐ negotiates with sensitivity solutions to wildlife management problems

**Evaluating Choices/Making Decisions**

- ☐ describes in detail important and appropriate alternatives regarding the wildlife management issue
- ☐ establishes knowledge- and value-based criteria for assessing each alternative;  
*e.g., social, economic, environmental*
- ☐ selects an appropriate and useful alternative by showing differences among choices
- ☐ assesses strengths/weaknesses of decisions by considering consequences and implications for spaces and/or species
- ☐ communicates thoughts/feelings/ideas clearly to justify choices/decisions made
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

**REFLECTIONS/COMMENTS**

**POSITION PAPER: Wildlife Management**

WLD3050-5

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0 N/A
Content	4	3	2	1	0 N/A
Presenting/Reporting	4	3	2	1	0 N/A

**STANDARD IS 3 IN EACH APPLICABLE TASK**

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
  - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
  - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
  - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
  - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**TASK CHECKLIST**

*The student:*

**Preparation and Planning**

- ☐ sets goals and describes steps to achieve them
- ☐ uses personal initiative to formulate questions and find answers
- ☐ accesses a range of relevant information sources and recognizes when additional information is required
- ☐ interprets, organizes and combines information in creative and thoughtful ways
- ☐ records information accurately using appropriate technical terms and supporting detail
- ☐ plans and uses time effectively, prioritizing tasks on a consistent basis
- ☐ assesses and refines approach to task and project status based on feedback and reflection

**Content**

- ☐ provides a clear and concise statement of an issue regarding the management of a wildlife space and/or species
- ☐ describes social, political, scientific, ethical, economic and environmental perspectives related to the issue
- ☐ develops a logical argument and conclusions regarding a position taken on the issue, and provides a rationale for the position taken
- ☐ develops a plan of action for dealing with the issue at local and global levels
- ☐ provides a glossary of terms relevant to the issue

Content (continued)

☐

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**Presenting/Reporting**

- ☐ demonstrates effective use of a variety of communication media:

*e.g., Written: spelling, punctuation, grammar, format (formal/informal, technical/literary)*

*Oral: voice projection, body language, appearance, enthusiasm, evidence of prior practice*

*Audio-Visual: techniques, tools, clarity, speed and pacing*

- ☐ maintains acceptable grammatical and technical standards through proofreading and editing
- ☐ provides an introduction that describes the purpose and scope of the project
- ☐ communicates thoughts/feelings/ideas clearly to justify or challenge a position
- ☐ states a conclusion by analyzing and synthesizing the information gathered
- ☐ gives evidence of adequate research through a reference list including seven or more relevant information sources

**REFLECTIONS/COMMENTS**

# KNOWLEDGE/APPLICATION ASSESSMENT: Principles of Wildlife Management

WLD3060-1

## Assessment Criteria and Conditions:

- explaining the general objectives of wildlife management.

## Suggested Reference(s):

- The Nature of Canada: A Primer on Spaces and Species*
- Project Wild*
- Alberta Conservation and Hunter Education*

**STANDARD:** Respond to a minimum standard of 3 on the rating scale

## Rating Scale

*The student:*

- meets project/task objectives in a self-directed manner. Provides explanations and critical judgements based on a superior knowledge base. Demonstrates an understanding of relevant concepts and related issues.
- meets project/task objectives in a self-directed manner. Provides explanations and comparisons of relevant concepts using precise terminology. Requires little or no prompting.
- meets project/task objectives with limited assistance in planning and in selecting and using resources. Applies knowledge of concepts in different situations using correct terminology. Requires occasional prompting.
- completes task as directed, demonstrating basic skills/completeness by following a guided course of action. Uses simple recall to demonstrate basic knowledge of concepts. Requires prompting.
- does not complete task, or is unable to provide a suitable response.

N/A Not applicable

Background Information	Sample Questions/Activities
<p>See <i>The Nature of Canada: A Primer on Spaces and Species</i>, Chapter 6: The 100 Per Cent Solution:</p> <p><u>The 100 Per Cent Solution</u></p> <p>Q83: What is the "100 per cent solution"?</p> <p>Q84: Why is 12 per cent the target for protected areas?</p> <p>Q85: Why do we need stewardship as well as protection?</p> <p><u>Setting Aside Protected Natural Areas</u></p> <p>Q86: What are protected natural areas?</p> <p>Q87: Who creates protected natural areas?</p> <p>Q88: What are the different kinds of protected natural areas?</p> <p>Q89: What are representative protected areas?</p> <p>Q90: What are critical natural areas?</p> <p><u>Stewardship: Making Room for Wildlife</u></p> <p>Q94: What is a steward?</p> <p>Q95: Is good stewardship related to sustainable development?</p> <p>Q97: How are foresters helping wildlife?</p> <p>Q98: How are farmers helping wildlife?</p> <p>Q99: What are other landowners doing to help wildlife?</p> <p>Q100: What are cities doing to make more room for wildlife?</p> <p>Q101: What's being done to restore degraded ecosystems?</p> <p>Q102: What's being done to recover specific wildlife species?</p>	<p><b>1.</b> Explain basic principles of ecology relevant to wildlife management; e.g.:</p> <ul style="list-style-type: none"><li>habitat</li><li>succession</li><li>carrying capacity</li><li>limiting factors</li><li>disease and parasites</li><li>population dynamics.</li></ul> <p><b>2.</b> Define sustainable management within the context of wildlife spaces and species.</p> <p><b>3.</b> Identify major social, economic and environmental factors addressed through wildlife management.</p> <p><b>4.</b> Explain the mandates of the following agencies in making decisions involving wildlife in Canada:</p> <ul style="list-style-type: none"><li>local government agencies</li><li>provincial government agencies</li><li>federal government agencies</li><li>private landowners.</li></ul> <p><b>5.</b> Explain processes for consultation and public involvement in wildlife management decisions.</p>

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**INTERVIEW TECHNIQUES: Wildlife Manager****WLD3060-2**

<b>Rating</b>	<b>INTERVIEW TECHNIQUE</b>
	<i>The student:</i>
<b>4</b>	<b>Gathering and Recording Data</b>
<b>3</b>	<input type="checkbox"/> identifies and clearly states the interview topic
<b>2</b>	<input type="checkbox"/> accesses a range of relevant background information sources
<b>1</b>	<input type="checkbox"/> lists/formulates potential questions to be asked
<b>0</b>	<input type="checkbox"/> defines and limits each question to be asked
	<input type="checkbox"/> records each interview response accurately with appropriate supporting detail and using correct technical terms
	<input type="checkbox"/>
<b>4</b>	<b>Comprehension, Analysis and Synthesis</b>
<b>3</b>	<input type="checkbox"/> interprets, organizes and combines information in creative and thoughtful ways
<b>2</b>	<input type="checkbox"/> recognizes underlying bias./assumptions/values expressed through each interview response
<b>1</b>	<input type="checkbox"/> summarizes each interview response in a concise and explicit way
<b>0</b>	<input type="checkbox"/> applies information gathered regarding wildlife management to other situations, spaces and/or species
	<input type="checkbox"/> establishes conclusions regarding wildlife management principles based on the results of interview
	<input type="checkbox"/>
<b>4</b>	<b>Information Sharing</b>
<b>3</b>	<input type="checkbox"/> demonstrates effective use of one or more communication media (e.g., written, oral, multi/media)
<b>2</b>	<input type="checkbox"/> communicates thoughts/feelings/ideas clearly
<b>1</b>	<input type="checkbox"/> maintains acceptable grammatical and technical standards
<b>0</b>	<input type="checkbox"/>

**REFLECTIONS/COMMENTS****SAMPLE INTERVIEW QUESTIONS**

- How are management goals established?
- How are limiting factors determined?
- What steps are used to establish a management plan for a particular space or species?
- Who identifies wildlife problems that need to be addressed through management?
- Why do wildlife spaces and/or species need to be managed?
- Who are the key stakeholder groups involved in management decisions?
- Does the historical background of a space or species affect management practices/decisions?
- How are management outcomes monitored to ensure consistency with management goals?
- How is the success of a particular management project evaluated?

**STANDARD IS 3 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.

N/A Not applicable

**SUMMARY AND ANALYSIS: A Wildlife Management Plan**

**WLD3060-3**

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0 N/A
Information Gathering and Processing	4	3	2	1	0 N/A
Content	4	3	2	1	0 N/A
Collaboration and Teamwork	4	3	2	1	0 N/A
Information Sharing	4	3	2	1	0 N/A

**STANDARD IS 3 IN EACH APPLICABLE TASK**

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
  - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
  - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
  - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
  - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**TASK CHECKLIST**

*The student:*

**Preparation and Planning**

- ☐ sets clear goals and establishes steps to achieve them
- ☐ creates and adheres to detailed timelines
- ☐ uses personal initiative to formulate questions and find answers
- ☐ plans and uses time effectively, prioritizing tasks on a consistent basis

**Information Gathering and Processing**

- ☐ accesses a range of relevant information sources and recognizes when additional information is required
- ☐ demonstrates resourcefulness in collecting data
- ☐ interprets, organizes and combines information in creative and thoughtful ways
- ☐ records information accurately with appropriate supporting detail and using correct technical terms
- ☐ assesses and refines approach to the task and project status based on feedback and reflection

**Content**

- ☐ provides a clear and concise statement of management goals and objectives
- ☐ identifies and describes basic steps involved in the management plan
- ☐ describes data collection and research techniques employed in developing the plan
- ☐ identifies political, social, economic, environmental, ethical and/or scientific perspectives addressed through the management plan

**Content (continued)**

- ☐ summarizes management strategies and/or tools employed in the management plan
- ☐ identifies positive and negative outcomes/consequences, and potential conflicts with different stakeholder groups
- ☐ develops a position regarding the plan and provide a rationale for the position taken
- ☐ makes recommendations for dealing with the plan at the local level

**Collaboration and Teamwork**

- ☐ provides a glossary of terms relevant to the wildlife management plan
- ☐ cooperates with group members
- ☐ shares work appropriately among group members
- ☐ negotiates with sensitivity solutions to problems
- ☐ displays effective communication and leadership skills

**Information Sharing**

- ☐ demonstrates effective use of a variety of communication media:  
*e.g., written, oral, audio-visual*
- ☐ communicates thoughts/feelings/ideas clearly to justify or challenge a position
- ☐ maintains acceptable grammatical and technical standards
- ☐ gives evidence of adequate information gathering by citing a range of relevant information sources

**REFLECTIONS/COMMENTS**

**ASSESSMENT CRITERIA: Developing a Wildlife Management Plan****WLD3060-4****Criteria for Assessing a Management Plan***The student:*

- ☐ provides background information regarding management history and current status of the space or species
- ☐ provides a statement of short- and long-term goals for management
- ☐ identifies relevant social, economic and environmental factors that need to be addressed through the management plan
- ☐ presents a course of action for managing the space or species
- ☐ anticipates/predicts outcomes and impacts of management practices on targeted and other spaces/species
- ☐ develops strategies for monitoring actual outcomes and impacts of management practices
- ☐ prepares maps/diagrams/graphs/videotape footage to accompany and elaborate upon the management plan

**STANDARD: Develop and present the plan to a standard of 3 on the rating scale****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
  - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
  - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
  - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
  - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**Sample Topics/Themes for A Management Plan**

- The deer population in your community has increased dramatically. How will you manage this increasing population?
- There are gulls in the school yard. Why are they there? How can they be managed?
- How can interactions between the black bear and bee farmer be managed for the benefit of both?
- You are a cattle rancher in grizzly bear country. How can you manage cattle-bear interactions?
- How can local wetlands be managed for the benefit of ducks?
- You are a cattle rancher and need hay to feed your cattle. How can you manage hay cutting so as to maintain nesting grounds for ducks?
- How can a farmstead be managed for the benefit of wildlife? Which species benefit from shelter belts?
- How can wildlife interactions be managed around dams?
- How do forestry practices affect wildlife abundance and survival?
- How has the introduction of the cowbird affected the abundance of other bird species?
- How should short and tall prairie grass be managed?
- How does the practice of zero-tillage affect wildlife?
- What is the role of predator-control programs in wolf management?
- How do large windows affect the survival of bird species? What can be done to increase the survival of bird species around large windows?
- How does "Bucks for Wildlife" affect the survival of wildlife? Which species benefit?
- How is waterfowl survey data used to set bag limits?
- How does information obtained through the sale of hunting licences contribute to the management of wildlife?

**Agencies to Contact for Further Information**

Current wildlife management plans provide useful information regarding management processes, strategies and tools. Request information regarding existing management plans from:

- Ducks Unlimited
- Trout Unlimited
- Bull Trout Task Force
- Western Walleye Council
- Alberta Fish and Wildlife.

**ISSUE ANALYSIS: Alternatives and Consequences****WLD3090-1**

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0
Analyzing Perspectives	4	3	2	1	0
Collaboration and Teamwork	4	3	2	1	0
Evaluating Choices and Making Decisions	4	3	2	1	0

**STANDARD IS 3 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**TASK CHECKLIST***The student:***Preparation and Planning**

- ☐ accurately describes five current issues in wildlife on which people disagree, explaining specific causes of disagreement
- ☐ poses thoughtful questions regarding each of the issues
- ☐ accesses a range of relevant information sources and recognizes when additional information is required
- ☐ demonstrates resourcefulness in collecting data

**Analyzing Perspectives**

- ☐ categorizes different points of view regarding each of five issues in wildlife:  
*e.g., cultural, ethical, economic, environmental, health-related, scientific, political*
- ☐ states a position on each issue and insightful reasons for adopting that position
- ☐ states three or more opposing positions on each issue and thoughtful reasons for adopting those positions
- ☐ analyzes interrelationships among different perspectives/points of view
- ☐ recognizes underlying bias/assumptions/values in information and ideas

**Collaboration and Teamwork**

- ☐ shares work appropriately among group members
- ☐ respects and considers the views of others
- ☐ negotiates with sensitivity solutions to wildlife management problems

**Evaluating Choices/Making Decisions**

- ☐ describes in detail important and appropriate alternatives regarding each of five wildlife issues
- ☐ establishes knowledge- and value-based criteria for assessing each alternative:  
*e.g., social, economic, environmental*
- ☐ selects an appropriate and useful alternative for each issue by showing differences among choices
- ☐ assesses strengths/weaknesses of decisions by considering consequences and implications for spaces and/or species
- ☐ communicates thoughts/feelings/ideas clearly to justify choices/decisions made

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**REFLECTIONS/COMMENTS**



**RESEARCH PROCESS: A Wildlife Issue****WLD3090-2**

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0
Information Gathering and Processing	4	3	2	1	0
Content	4	3	2	1	0
Collaboration and Teamwork	4	3	2	1	0
Information Sharing	4	3	2	1	0

**STANDARD IS 3 IN EACH APPLICABLE TASK****Rating Scale***The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
- 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
- 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
- 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
- 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

**TASK CHECKLIST***The student:***Preparation and Planning**

- ☐ sets clear goals and establishes steps to achieve them
- ☐ creates and adheres to detailed timelines
- ☐ uses personal initiative to formulate questions and find answers
- ☐ plans and uses time effectively, prioritizing tasks on a consistent basis

**Information Gathering and Processing**

- ☐ accesses a range of relevant information sources and recognizes when additional information is required
- ☐ demonstrates resourcefulness in collecting data
- ☐ interprets, organizes and combines information in creative and thoughtful ways
- ☐ records information accurately with appropriate supporting detail and using correct technical terms
- ☐ recognizes underlying bias/assumptions/values in information sources
- ☐ assesses and refines approach to the task and project status based on feedback and reflection

**Content**

- ☐ provides a clear and concise description of one international wildlife issue
- ☐ identifies the stakeholders involved and their respective points of view
- ☐ identifies and explains the positive and negative impacts of the issue on wildlife and on society
- ☐ provides a statement of personal position regarding the issue and a rationale for the position taken

**Content (continued)**

- ☐ suggests strategies or actions to respond to the issue; e.g.:
  - Who should use the resource and/or how much should be used?
  - How do various land users influence the long-term survival of this space or species?
  - What should be done to enhance the space or species?
  - What should be done in situations where there is conflict with humans?
- ☐ compare and contrast the issue with a similar issue in Canada and/or Alberta
- ☐

**Collaboration and Teamwork**

- ☐ cooperates with group members
- ☐ shares work appropriately among group members
- ☐ negotiates solutions to problems
- ☐ displays effective communication and leadership skills

**Information Sharing**

- ☐ demonstrates effective use of a variety of communication media:
  - e.g., written, oral, audio-visual
- ☐ communicates thoughts/feelings/ideas clearly to justify or challenge a position
- ☐ maintains acceptable grammatical and technical standards
- ☐ gives evidence of adequate information gathering by citing relevant information sources.

**REFLECTIONS/COMMENTS**

**POSITION PAPER: Wildlife Conservation and Management**

**WLD3090-3**

TASK	OBSERVATION/RATING				
Preparation and Planning	4	3	2	1	0
Content	4	3	2	1	0
Presenting/Reporting	4	3	2	1	0

**STANDARD IS 3 IN EACH APPLICABLE TASK**

**Rating Scale**

*The student:*

- 4 exceeds defined outcomes. Plans and solves problems effectively and creatively in a self-directed manner. Tools, materials and/or processes are selected and used efficiently, effectively and with confidence.
  - 3 meets defined outcomes. Plans and solves problems in a self-directed manner. Tools, materials and/or processes are selected and used efficiently and effectively.
  - 2 meets defined outcomes. Plans and solves problems with limited assistance. Tools, materials and/or processes are selected and used appropriately.
  - 1 meets defined outcomes. Follows a guided plan of action. A limited range of tools, materials and/or processes are used appropriately.
  - 0 has not completed defined outcomes. Tools, materials and/or processes are used inappropriately.
- N/A Not applicable

TASK CHECKLIST	
<p><i>The student:</i></p> <p><b>Preparation and Planning</b></p> <p><input type="checkbox"/> sets goals and describes steps to achieve them</p> <p><input type="checkbox"/> uses personal initiative to formulate questions and find answers</p> <p><input type="checkbox"/> accesses a range of relevant information sources and recognizes when additional information is required</p> <p><input type="checkbox"/> interprets, organizes and combines information in creative and thoughtful ways</p> <p><input type="checkbox"/> records information accurately using appropriate technical terms and supporting detail</p> <p><input type="checkbox"/> plans and uses time effectively, prioritizing tasks on a consistent basis</p> <p><input type="checkbox"/> assesses and refines approach to task and project status based on feedback and reflection</p>	<p><b>Content (continued)</b></p> <p><input type="checkbox"/> develops a plan of action for dealing with the issue at local and/or global levels</p> <p><input type="checkbox"/> provides a glossary of terms relevant to the issue</p> <p><input type="checkbox"/></p> <p><b>Presenting/Reporting</b></p> <p><input type="checkbox"/> demonstrates effective use of a variety of communication media; e.g., <u>Written</u>: <i>spelling, punctuation, grammar, format (formal/informal, technical/literary)</i> <u>Oral</u>: <i>voice projection, body language, appearance, enthusiasm, evidence of prior practice</i> <u>Audio-Visual</u>: <i>techniques, tools, clarity, speed and pacing</i></p> <p><input type="checkbox"/> maintains acceptable grammatical and technical standards through proofreading and editing</p> <p><input type="checkbox"/> provides an introduction that describes the purpose and scope of the project</p> <p><input type="checkbox"/> communicates thoughts/feelings/ideas clearly to justify or challenge a position</p> <p><input type="checkbox"/> states a conclusion by analyzing and synthesizing the information gathered</p> <p><input type="checkbox"/> gives evidence of adequate research through a reference list including relevant and current information sources</p>

**REFLECTIONS/COMMENTS**

# WILDLIFE

## SECTION H: LINKAGES/TRANSITIONS

This section of the Guide has been designed to provide an overview of linkages and transitions of CTS modules with a number of organizations. The charts and information presented in this section will assist CTS students and teachers in understanding the potential application of CTS modules as students move into the workplace.

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## LINKAGES/TRANSITIONS

### LINKAGES

#### With Other CTS Strands

The Wildlife strand provides opportunities for students to develop competencies in one or more wildlife-related areas, including:

- recreation
- tourism
- resource harvest
- literature, art and film
- conservation and management
- research.

Each Wildlife-related area links with competencies that are developed in other CTS strands. To facilitate and strengthen these linkages, courses may be designed by combining Wildlife modules with modules from other CTS strands (e.g., Agriculture, Community Health, Legal Studies, Forestry, Tourism Studies).

Linkages of particular relevance to the design of CTS courses in Wildlife include:

Strand	Themes and/or Modules
Agriculture	Modules within the "Management and Conservation" theme can be linked with a range of wildlife topics and issues (e.g., the value of wildlife, wildlife management, issue analysis, negotiation and debate).
Career Transitions	<b>Project modules</b> provide opportunities for learning beyond the expectations of given Wildlife modules. <b>Practicum modules</b> enable students to work toward obtaining credentials in recognized in the workplace/community. <b>Safety modules</b> provide opportunities to address safety skills relevant to wildlife-related pursuits. <b>Leadership modules</b> have application in a range of group activities conducted in outdoor wilderness environments.

Strand	Themes and/or Modules
Community Health	Modules within the "Injury Prevention" theme link with a range of competencies developed within the Wildlife strand.
Forestry	Modules within the "Management and Conservation" theme can be linked with a range of wildlife topics and issues (e.g., the value of wildlife, wildlife management, issue analysis, negotiation and debate).
Legal Studies	Modules within the "Societal Contexts" theme (e.g., Environmental Law, Dispute Resolution, Landmark Decisions) can be contextualized within areas of wildlife management.
Tourism Studies	Modules within the "Attractions" theme can be linked with the study of spaces and species (e.g., outdoor adventure, ecotourism).

It is important to note that the project, practicum and safety modules in Career Transitions may be combined with Wildlife modules to provide opportunities for students to:

- acquire safety competencies and credentials
- develop specific workplace skills
- expand upon a topic in a module or theme
- complete an investigation, project or service.

Additional information regarding connections with other CTS strands is provided in this section (see "Connections with Other CTS Strands").

Sample courses in Wildlife that include modules from other CTS strands are also provided in this section (see "Wildlife in Junior High" and "Wildlife in Senior High").



## With Other Secondary Programs

The Wildlife strand has many links with other core and complementary subject areas across the curriculum. For example, many of the modules in Wildlife link with the junior and senior high science programs, and provide opportunities for students to extend and apply related knowledge and skills in practical ways. Modules in the Wildlife strand also link with topics developed in the complementary junior high Environmental and Outdoor Education program.

Core and complementary course linkages of particular relevance to CTS courses in Wildlife include:

Course/ Program Area	Linkage/Connection
<b>Language Arts</b>	Application of the research process; development of reporting and oral/multimedia presentation skills within a range of wildlife contexts.
<b>Mathematics</b>	Application of number operations, variables and equations, measurement (i.e., length, area, volume), statistics and probability to wildlife populations and management practices.
<b>Science</b>	Use of observation and experimentation; knowledge and theory of relevant topics in biology, ecology and earth science; analysis of relationships among science, technology, society and the environment.
<b>Social Studies</b>	Knowledge of the impact of social, economic and environmental perspectives on spaces and species; issue analysis, negotiation, debate and environmental citizenship within a range of wildlife contexts.
<b>Physical Education</b>	Application of personal fitness and outdoor survival skills to excursions in a wilderness environment.
<b>Fine Arts</b>	Knowledge and awareness of the significance of wildlife in art, music and drama.

Course/ Program Area	Linkage/Connection
<b>Environmental and Outdoor Education</b>	Application of outdoor and personal/group skills to activities conducted in wilderness environments; application of environmental knowledge/skills to wildlife spaces, species and management practices.
<b>CALM</b>	Awareness of career opportunities and trends; career research and preparation.

Additional information regarding connections between Wildlife modules and other core and complementary subject areas is provided in this section (see "Forestry: Connections Across the Curriculum").

A detailed correlation of the Wildlife strand to the Environmental and Outdoor Education program is also provided in this section (see "Wildlife: Correlations with Environmental and Outdoor Education 7, 8 and 9").

## TRANSITIONS

### To the Workplace

Intermediate and advanced modules are designed to develop knowledge, skills and attitudes that provide transitions to occupations in wildlife-related areas. Some career sectors welcome individuals who have basic skills and are prepared to learn through further training from the employer.

The National Occupational Classification (NOC) chart in this section indicates occupations for which the Wildlife strand provides a foundation (see "Wildlife: Related Occupations").

### To Related Post-secondary Programs

Advanced level modules will assist students to make plans regarding further studies in wildlife at post-secondary levels. The Wildlife modules provide desirable background and skills for entry

into related programs at public and private colleges, technical institutes, universities and vocational colleges in Alberta.

A summary of related programs currently offered at post-secondary institutions in Alberta is provided in this section (see Wildlife: Summary of Related Post-Secondary Programs”).

A number of articulation agreements have been established with post-secondary institutions in Alberta. These agreements provide preferred entrance and/or advanced standing/credit for CTS students who have successfully completed designated modules. A current summary of articulation agreements in place that involve CTS modules is available through Alberta Education’s web site at <<http://ednet.edc.gov.ab.ca>>. For further information regarding particular articulation agreements, contact the post-secondary institution and/or review its respective calendar.

Teachers may wish to explore opportunities for linking courses in Wildlife with these and/or other credentialling programs. A partial list of credentialling opportunities relevant to CTS courses in Wildlife is provided in this section (see “Credentialling Opportunities in Wildlife”).

Further information regarding these and other credentialling opportunities available to CTS students is provided in the *Career & Technology Studies Manual for Administrators, Counsellors and Teachers* (see Appendix 14: Credentialling Opportunities in CTS), and also through Alberta Education’s web site at <<http://ednet.edc.gov.ab.ca>>.

## CREDENTIALLING

Students may earn partial or complete credentials recognized in the workplace and/or post-secondary institutions by demonstrating specified competencies within the CTS curriculum. The Wildlife strand, in conjunction with modules from the Career Transitions strand, provides opportunities for students to develop competencies that link with a number of credentialling programs.

Of particular significance are credentials available through:

- First Aid certificate courses
- Alberta Environmental Protection and the WISE Foundation
- Alberta Tourism Education Council (ATEC) programs.

## LINKAGES – Wildlife: Connections with Other CTS Strands

Wildlife Modules	Other CTS Strands																
	Agriculture	Career Transitions	Communication Technology	Community Health	Construction Technologies	Cosmetology Studies	Design Studies	Energy and Mines	Electro-Technologies	Enterprise and Innovations	Fashion Studies	Financial Management	Foods	Fabrication Studies	Forestry	Legal Studies	Logistics
<b>Theme: Social and Cultural Perspectives</b>																	
WLD1010: What is Wildlife?																	
WLD1020: Natural History of Wildlife																	
WLD1030: Outdoor Experiences 1																	
WLD2020: Measuring the Value																	
WLD2030: Outdoor Experiences 2																	
WLD3020: Making a Difference																	
<b>Theme: Technology and Applications</b>																	
WLD2040: Wildlife Spaces & Species																	
WLD3040: Wildlife Research																	
<b>Theme: Management and Conservation</b>																	
WLD1050: Taking Responsibility																	
WLD1070: Hunting & Game Management 1																	
WLD1080: Angling & Fish Management																	
WLD2060: Interactions																	
WLD2070: Hunting & Game Management 2																	
WLD2090: Issues in Wildlife 1																	
WLD3050: Wildlife Management 1																	
WLD3060: Wildlife Management 2																	
WLD3090: Issues in Wildlife 2																	

Provides many direct links with competencies in this strand. Students will reinforce, extend and apply a substantial number of knowledge and/or skill components in practical situations.

Provides some links with competencies developed in this strand, usually through the application of related technologies and/or processes.

## LINKAGES – Wildlife in Junior High

Course Emphasis	Wildlife Modules	Community Health Modules	Forestry Modules	Tourism Studies Modules
Literature, Art and Film (3 modules)	<div>What is Wildlife? <i>WLD1010</i></div> <div>Natural History of Wildlife <i>WLD1020</i></div>			<div>The Attractions Sector <i>TOU1070</i></div>
Recreation (4 modules)	<div>What is Wildlife? <i>WLD1010</i></div> <div>Outdoor Experiences 1 <i>WLD1030</i></div> <div>Outdoor Experiences 2 <i>WLD2030</i></div>	<div>First Aid/ CPR <i>CMH2120</i></div>		
Resource Harvest (5 modules)	<div>What Is Wildlife? <i>WLD1010</i></div> <div>Hunting &amp; Game Management 1 <i>WLD1070</i></div> <div>Hunting &amp; Game Management 2 <i>WLD2070</i></div> <div>Taking Responsibility <i>WLD1050</i></div>	<div>First Aid CPR <i>CMH2120</i></div>		
Conservation and Management (6 modules)	<div>What Is Wildlife? <i>WLD1010</i></div> <div>Wildlife Spaces &amp; Species <i>WLD2040</i></div> <div>Taking Responsibility <i>WLD1050</i></div> <div>Issues in Wildlife 1 <i>WLD2090</i></div>		<div>Forest Regions of Canada <i>FOR1020</i></div> <div>Forests Forever 1 <i>FOR1100</i></div>	



## LINKAGES – *Wildlife in Senior High*

Course Emphasis	Wildlife Modules	Forestry Modules	Tourism Studies Modules	Career Transitions Modules
<b>Basic Wildlife Management</b> (3 credits)  <b>Prerequisite:</b> None	<div>What Is Wildlife? <i>WLD1010</i></div> <div>Interactions <i>WLD2060</i></div>	<div>Making a Difference <i>FOR2010</i></div>		
<b>Advanced Wildlife Management</b> (5 credits)  <b>Prerequisite:</b> Basic Wildlife Management	<div>Wildlife Research <i>WLD3040</i></div> <div>Wildlife Management 1 <i>WLD3050</i></div> <div>Wildlife Management 2 <i>WLD3060</i></div>	<div>Managing Alberta Forests <i>FOR2030</i></div>		<div>Project 2A <i>CTR2110</i></div>
<b>Recreation and Tourism</b> (5 credits)  <b>Prerequisites:</b> Outdoor Experiences 1	<div>Wildlife Spaces &amp; Species <i>WLD2040</i></div> <div>Outdoor Experiences 2 <i>WLD2030</i></div> <div>Making a Difference <i>WLD3020</i></div>		<div>Adventure &amp; Ecotourism <i>TOU3110</i></div>	<div>Workplace Safety <i>CTR2210</i></div>
<b>Environmental Stewardship</b> (3 credits)  <b>Prerequisite:</b> Issues in Wildlife 1	<div>Measuring the Value <i>WLD2020</i></div> <div>Issues in Wildlife 2 <i>WLD3090</i></div>			<div>Project 2A <i>CTR2110</i></div>

## LINKAGES – Wildlife: Connections Across the Curriculum

Wildlife Modules	Across the Curriculum															
	Junior High								Senior High							
	Language Arts	Social Studies	Mathematics	Science	Health & PLS	Physical Education	Fine Arts	English	Social Studies	Mathematics	Science (General)	Biology	Chemistry	Physics	CALM	Physical Education
<b>Theme: Social and Cultural Perspectives</b>																
WLD1010: What is Wildlife?																
WLD1020: Natural History of Wildlife																
WLD1030: Outdoor Experiences 1																
WLD2020: Measuring the Value																
WLD2030: Outdoor Experiences 2																
WLD3020: Making a Difference																
<b>Theme: Technology and Applications</b>																
WLD2040: Wildlife Spaces & Species																
WLD3040: Wildlife Research																
<b>Theme: Management and Conservation</b>																
WLD1050: Taking Responsibility																
WLD1070: Hunting & Game Management 1																
WLD1080: Angling & Fish Management																
WLD2060: Interactions																
WLD2070: Hunting & Game Management 2																
WLD2090: Issues in Wildlife 1																
WLD3050: Wildlife Management 1																
WLD3060: Wildlife Management 2																
WLD3090: Issues in Wildlife 2																

Provides many direct links with course content. Students will reinforce, extend and apply a substantial number of knowledge and skill components in practical contexts.

Provides some links with competencies developed in this strand, usually through the application of related technologies and/or processes.



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**LINKAGES – Wildlife: Correlations with Environmental and Outdoor Education 7, 8 and 9 ★**

**Modules: CTS Wildlife**

Topics / Themes: Environmental and Outdoor Education	What is Wildlife?	Natural History of Wildlife	Outdoor Experiences 1	Taking Responsibility	Hunting & Game Management 1	Angling & Fish Management	Measuring the Value	Outdoor Experiences 2	Wildlife Spaces & Species Interactions	Hunting & Game Management 2	Issues in Wildlife 1	Making a Difference	Wildlife Research	Wildlife Management 1	Wildlife Management 2	Issues in Wildlife 2
<b>OUTDOOR CORE</b>																
Regard for self, others and the environment			X		X	X		X			X					
Trip preparation and safety			X		X	X		X			X					
Safe and comfortable outdoor living skills			X		X	X		X			X					
Applying information for safe route planning			X					X								
Environmentally responsible outdoor activities			X		X	X		X			X					
Physical fitness for outdoor activities					X						X					
<b>PERSONAL AND GROUP DEVELOPMENT</b>																
Respect and appreciation for self and others	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Setting realistic goals	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Personal communication skills	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Relationship of individuals to groups	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Group process skills	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
<b>ENVIRONMENTAL CORE</b>																
Diversity of environments and life forms	X	X		X			X		X							
Interactions within environments	X	X		X			X		X		X					X
Natural and human changes to the environment	X	X		X			X		X	X		X	X			X
Air, water and soil cycles	X			X			X									
The Sun as the primary energy source on Earth	X															
<b>OUTDOOR EXPEDITIONS</b>																
Skill and judgment in outdoor expeditions			X		X	X		X			X					
Positive self-concept and regard for others			X		X	X		X			X					
Group problem solving and group living skills			X		X	X		X			X					
Regard for environments and responsible outdoor judgment			X		X	X		X			X					
<b>ENVIRONMENTAL INVESTIGATIONS</b>																
Environmental investigation skills		X							X			X		X	X	X
Strategies for responding to environmental concerns				X			X		X	X		X	X		X	X
<b>COMMITMENT TO ACTION</b>																
Outdoor recreation as part of healthy lifestyle			X					X								
Appreciation of environments through respectful use	X		X	X	X	X	X	X			X	X	X		X	X
Responsible use of local and global environments			X	X	X	X	X	X		X	X	X	X		X	X
Plans to make personal growth a lifelong process				X			X									

★ September 1997: All practical arts courses replaced by Career and Technology Studies.

## TRANSITIONS – *Wildlife: Related Occupations*

Information for this chart was obtained from the National Occupational Classification (NOC) descriptions.

### Educational Requirements:

D: High School Education

C: Apprenticeship

B: College or Vocational Education

A: University

STRAND-RELATED OCCUPATIONS		EDUCATION REQUIREMENTS			
Occupation Profile	NOC#	D	C	B	A
Animal Health Technologist	3231			✓	
Biochemist	2112				✓
Biological Technician	2221				✓
Biologist and Related Scientist	2121				✓
Botanist	2121				✓
Chemist	2112				✓
Conservation and Fishery Officer	2224			✓	
Environmental Auditor	2263				✓
Environmental Education Specialist	4169				✓
Environmental Engineer	2131/2148				✓
Hazardous Waste Management Technician	2263			✓	
Hydrologist	2113				✓
Inspectors in Public and Environmental Health and Occupational Health and Safety	2263			✓	✓
Marine Biologist	2121				✓
Oceanographer	2113				✓
Park Warden/Park Ranger	2224			✓	
Pest Control Operator/Exterminator	7444		✓		
Pollution Control Technician	2211			✓	
Trappers and Hunters	8442	✓			
Veterinarian	3114				✓
Wildlife, Habitat and Fish Biologist	2121				✓

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# LINKAGES – Wildlife: Summary of Post-secondary Programs

	PUBLIC COLLEGES								PRIVATE COLLEGES		TECH. INST.	Banff	UNIVERSITIES				VOCATIONAL COLLEGES			
	Grande Prairie Regional College	Grant MacEwan Community College	Keyano College	Lakeland College	Leibniz Community College	Medicine Hat College	Mount Royal College	Olds College	Red Deer College	APPRENTICESHIP TRADE			University of Alberta	University of Calgary	University of Alberta	University of Alberta	AVC - Calgary	AVC - Edmonton	AVC - Lac La Biche	AVC - Lesser Slave Lake
Biological Sciences (including degree programs in Biochemistry, Biology, Botany, Entomology, Genetics, Microbiology & Zoology)	12t	2t		1t	12t	2t	2t	2t	2t				BMP hD	BMP hD	BMP hD	BM				
Biological Sciences/Biomedical Engineering Technology (certificate & diploma programs with various specializations)								1t	1t		D									
Environmental Science (various specializations in Conservation & Reclamation, Environmental Monitoring & Conservation Enforcement, Fish & Wildlife, Parks & Recreation, and Renewable Resource/Watershed Management)			1t	D	CD			CD			D	V	B	CM	B					C(3 4w)
Environmental Technology/Water & Wastewater Technician							CD				C									C
Forestry, Forest Science/Technology	1t			1t	1t	1t	1t	1t	1t		D		BMP hD			1t				C
Forestry/Logging Operations												V								VC
Petroleum/Mineral Resource/Land Management								D												
Leisure, Tourism & Society/Recreation Administration / Leisure (degree programs with various specializations)				C	1t			2t	2t				BM	B	BM					
Physical Education (degree programs with various specializations)	2t	1t		1t	2t	2t	D1t	2t	2t	B			BMP hD	BM	BM					
Recreation, Leadership & Management/Leisure Services (certificate and diploma programs with various specializations)					CD	D	D				D									C

B Bachelor's Degree  
 M Master's Degree  
 Ph.D. Doctoral Degree  
 C Certificate (1 year or less)

D Diploma (2 years)  
 V Varies  
 1t One-year transfer  
 2t Two-year transfer

w weeks  
 m months  
 y years

\*Information taken from "It's About Time: To Start Thinking About Your Future," Advanced Education and Career Development, 1995.

## CREDENTIALLING – *Credentialling Opportunities in Wildlife*

The following credentialling opportunities link with modules in the Wildlife strand. Further information (including current contacts) for these and other credentialling opportunities available to CTS students is available through Alberta Education's web site at <<http://ednet.edc.gov.ab.ca>>.

Credential/ Certificate	Training/ Credentialling Agency	Related CTS Strands/Modules	Program Description
<b>Alberta Conservation and Hunter Education Program</b>	Alberta Environmental Protection (Natural Resources Service) and the WISE Foundation	WLD1070: Hunting & Game Management 1 WLD2070: Hunting & Game Management 2	A provincially based credentialling program that examines the role of regulated hunting in managing Alberta wildlife. Deals with social and scientific aspects of hunting, and develops awareness of personal responsibilities while hunting or during related outdoor activities. The program has an optional field component that develops outdoor safety and survival skills.
<b>Alberta Fishing Education Program</b>	Alberta Environmental Protection (Natural Resources Service) and the WISE Foundation	WLD1080: Angling & Fish Management	A provincially based credentialling program that examines the role of recreational fishing in managing Alberta's fish resource. Deals with social and scientific aspects of fishing, and develops awareness of personal responsibilities while fishing or during related outdoor activities. The program has an optional field component that develops outdoor safety and survival skills.
<b>Alberta Trapper Education Certificate</b>	Alberta Trappers' Association	WLD3050: Wildlife Management 1 WLD3060: Wildlife Management 2 CTR3040–3080: Practicum Modules	A provincially based credentialling program that examines the role of regulated trapping in wild fur management. Assists individuals to meet the requirements established by Alberta Environmental Protection for obtaining a Trapping Licence.
<b>Bear Awareness and Avoidance:</b> • Basic • Advanced	Alberta Safety Council	WLD1030: Outdoor Experiences 1 WLD2030: Outdoor Experiences 2 CTR3040–3080: Practicum Modules CTR2210: Workplace Safety	A safety awareness program that offer certification at two levels. Each course deals with species recognition and bear biology, bear behaviour, avoiding bear problems and bear deterrents. Certificates are issued upon successful completion of an examination.

# **CREDENTIALLING – *Credentialling Opportunities in Wildlife* (continued)**

<b>Credential/ Certificate</b>	<b>Training/ Credentialling Agency</b>	<b>Related CTS Strands/Modules</b>	<b>Program Description</b>
<b>First Aid in the Wilderness</b>	St. John Ambulance	WLD1030: Outdoor Experiences 1 WLD2030: Outdoor Experiences 2 WLD1070: Hunting & Game Management 1 WLD2070: Hunting & Game Management 2 WLD1080: Angling & Fish Management  CTR3040–3080: Practicum Modules CTR2210: Workplace Safety	A credentialling program designed for individuals who work, live or play in wilderness or remote areas. Deals with how to cope with emergencies and provide first aid in remote settings where medical services are not available. Certificates are issued upon successful completion of an examination.
<b>Canadian Tourism Industry Certification:</b> <ul style="list-style-type: none"> <li>• Outdoor Guide</li> <li>• Freshwater Angling Guide</li> <li>• Hunting Guide</li> </ul>	Alberta Tourism Education Council	WLD1030: Outdoor Experiences 1 WLD2030: Outdoor Experiences 2  CTR3040–3080: Practicum Modules	Industry-based certification programs that address standards established by the tourism industry. Certificates are awarded to individuals who demonstrate occupational standards through written and practical testing.
<b>Canadian Firearms Safety Course</b>	Alberta Justice (Chief Provincial Firearms Office)	WLD2070: Hunting & Game Management 2  CTR3040-3080: Practicum Modules	An entry-level credentialling program based on national standards for knowledge of firearms and firearms laws, and for safe firearm handling. Deals with all aspects of safe and responsible firearms ownership and use, but is not meant to teach marksmanship or shooting accuracy. Assists individuals to meet requirements for obtaining a Firearms Acquisition Certificate (FAC).

# WILDLIFE

## SECTION I: LEARNING RESOURCE GUIDE

This section of the GSI has been designed to provide a list of resources that support student learning.

Three types of resources are identified:

- **Authorized:** Resources authorized by Alberta Education for CTS curriculum; these resources are categorized as basic, support, or teaching
- **Other:** Titles provided as a service to assist local jurisdictions to identify resources that contain potentially useful ideas for teachers. Alberta Education has done a preliminary review of these resources, but further review will be necessary prior to use in school jurisdictions
- **Additional:** A list of local, provincial and national sources of information available to teachers, including the community, government, industry, and professional agencies and organizations.

The information contained in this Guide, although as complete and accurate as possible as of June 1997, is time-sensitive.

For the most up-to-date information on learning resources and newer editions/versions, consult the LRDC *Buyers Guide* and/or the agencies listed in the Distributor Directory at the end of this section.



**CTS is on the Internet.**  
Internet Address:  
<http://ednet.edc.gov.ab.ca>



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# INTRODUCTION

## CTS AND THE RESOURCE-BASED CLASSROOM

Career and Technology Studies (CTS) encourages teachers to establish a resource-based classroom, where a variety of appropriate, up-to-date print and nonprint resources are available. Learning resources identified for CTS strands include print, software, video and CD-ROM formats. Also of significance and identified as appropriate throughout each strand are sources of information available through the Internet.

The resource-based classroom approach accommodates a variety of instructional strategies and teaching styles, and supports individual or small group planning. It provides students with opportunities to interact with a wide range of information sources in a variety of learning situations. Students in CTS are encouraged to take an active role in managing their own learning. Ready access to a strong resource base enables students to learn to screen and use information appropriately, to solve problems, to meet specific classroom and learning needs, and to develop competency in reading, writing, speaking, listening and viewing.

## PURPOSE AND ORGANIZATION OF THIS DOCUMENT

The purpose of this document is to help teachers identify a variety of resources to meet their needs and those of the students taking the new CTS curriculum. It is hoped that this practical guide to resources will help teachers develop a useful, accessible resource centre that will encourage students to become independent, creative thinkers.

This document is organized as follows:

- Authorized Resources:
  - basic learning resources
  - support learning resources
  - teaching resources
- Other Resources
- Additional Sources
- Distributor Directory.

Some resources in the guide have been authorized for use in some or all of the CTS strands, e.g., the Career and Technology Studies video series produced by ACCESS: The Education Station. Further information is provided in relevant sections of this resource guide.

Each resource in the guide provides bibliographic information, an annotation where appropriate, and a module correlation to the CTS modules. The distributor code for each entry will facilitate ordering resources. It is recommended that teachers preview all resources before purchasing, or purchase one copy for their reference and additional copies as required.

Distributor Code	Resources		Levels/Mod. No.			1 = Introductory 2 = Intermediate 3 = Advanced  Indicates module number
			1	2	3	
ACC	Title	Author	1010	2010	3010	
	Bibliographic Information					
	Annotation					

Distributor Code - see Distributor Directory

## HOW TO ORDER

Most authorized resources are available from the Learning Resources Distributing Centre (LRDC) at:

12360 – 142 Street  
Edmonton, AB T5L 4X9  
Telephone: 403-427-5775 (outside of Edmonton dial 310-0000 to be connected toll free)  
Fax: 403-422-9750  
Internet: <http://ednet.edc.gov.ab.ca/lrdc>

Please check LRDC for availability of videos.

## RESOURCE POLICY

Alberta Education withdraws learning and teaching resources from the provincial list of approved materials for a variety of reasons; e.g., the resource is out of print; a new edition has been published; the program has been revised. Under section 44 (2) of the *School Act*, school boards may approve materials for their schools, including resources that are withdrawn from the provincial list. **Many school boards have delegated this power to approve resources to school staff or other board employees under section 45 (1) of the *School Act*.**

For further information on resource policy and definitions, refer to the *Student Learning Resources Policy* and *Teaching Resources Policy* or contact:

Learning Resources Unit, Curriculum Standards Branch  
Alberta Education  
5<sup>th</sup> Floor, Devonian Building, East Tower  
11160 Jasper Avenue  
Edmonton, AB T5K 0L2  
Telephone: 403-422-4872 (outside of Edmonton dial 310-0000 to be connected toll free)  
Fax: 403-422-0576  
Internet: <http://ednet.edc.gov.ab.ca>

**Note:** Owing to the frequent revisions of computer software and their specificity to particular computer systems, newer versions may not be included in this guide. However, schools may contact the LRDC directly at 403-427-5775 for assistance in purchasing computer software.

**Trademark Notices:** Microsoft, Access, Excel, FoxPro, Mail, MS-DOS, Office, PowerPoint, Project, Publisher, Visual Basic, Visual C++, Windows, Windows NT, Word, and Works are either registered trademarks or trademarks of Microsoft Corporation. Apple, Mac, Macintosh, and Power Macintosh are either registered trademarks or trademarks of Apple Computer, Inc. Other brand and product names are registered trademarks or trademarks of their respective holders.

## AUTHORIZED RESOURCES

### BASIC LEARNING RESOURCES

The following basic learning resources have been authorized by Alberta Education for use in the Wildlife curriculum. These resources address the majority of the learner expectations in one or more modules and/or levels. A curriculum correlation appears in the right-hand column.

Distributor Code	Resources	Levels/Module No.		
		1	2	3
LRDC	<p><i>Alberta Conservation and Hunter Education.</i> Edmonton, AB: Alberta Forestry, Lands and Wildlife, AB Environmental Protection, 1989.</p> <p>This guide examines the role of regulated hunting in wildlife management and conservation. The resource serves as an identification guide to Alberta's game animals and develops awareness of personal responsibilities while hunting or during related outdoor activities. Topics addressed include: ethics and behaviour; wildlife management principles; personal/firearm/archery safety; outdoor survival techniques; first aid; and legal responsibilities.</p>	1020 1030 1070	2040 2060 2070	3020
LRDC	<p><i>Alberta Fishing Education Program.</i> Edmonton, AB: Alberta Forestry, Lands and Wildlife, AB Environmental Protection.</p> <p>This guide examines the role of recreational fishing in the management and conservation of fish resources. The resource serves as an identification guide to Alberta's game fish, and develops awareness of personal responsibilities while fishing or during related outdoor activities. Topics addressed include: ethics and behaviour; management principles; fishing techniques and equipment; safety; and legal responsibilities.</p>	1020 1030 1070 1080	2070	3020
LRDC	<p><i>Alberta Wildlife Viewing Guide.</i> Edmonton, AB: Lone Pine Publishing Company, 1990.</p> <p>This book will assist individuals to identify Alberta's important wildlife areas. It includes information about Alberta's National Parks, Provincial Parks, wildlife sanctuaries, natural areas and other designated viewing sites. This book discusses species likely to be encountered and provides maps that explain how to get to each site.</p>	1020 1070	2040	
LRDC	<p><i>Ecosystems.</i> B. Herridge and B. Chernin. Gage Educational Publishing, 1995.</p> <p>The 72 page student text provides an illustrated introduction to ecosystems and a more in-depth look at living and non-living factors and the roles they play in ecosystems. The text concludes with examples of human impacts on ecosystems and examines current issues from a variety of perspectives. The 500 page teacher's resource book provides teaching ideas correlated to the student text and suggestions regarding evaluation, supplementary resources and integrated projects. Blackline masters, reproducible for classroom use, are provided.</p>	1010 1020 1050	2020 2040 2060 2090	3020 3050 3090

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# Basic Learning Resources (continued)

Distributor Code	Resources	Levels/Module No.		
		1	2	3
LRDC	<p><i>Global Environment, The.</i> Steven Sterling and Sue Lyle. Mississauga, ON: Copp Clark Pitman, 1991.</p> <p>This text addresses a broad range of environmental issues within a global context. Issues are examined through a variety of stimulating activities, including case studies, discussion and role-playing.</p>	1050	2060 2090	3020 3090
LRDC	<p><i>Investigating Aquatic Ecosystems.</i> W.A. Andrews. Prentice Hall Canada/Ginn Publishing Co., 1987.</p> <p>This text reviews basic principles of ecology, then focuses attention on the ecology of freshwater and marine ecosystems. Each section includes investigative activities and key terms. Discussion questions and chapter reviews have been included throughout. The text is well illustrated with a variety of photographs, line drawing, tables and charts.</p>	1010 1020 1080	2040 2060	3040
LRDC	<p><i>Investigating Terrestrial Ecosystems.</i> William A. Andrews. Scarborough, ON: Prentice-Hall Canada Inc., 1986.</p> <p>This student textbook focuses attention on the ecology of our planet and more specifically terrestrial ecosystems. The content is intended to assist students to identify and resolve environmental issues. The textbook investigates basic concepts of terrestrial ecosystems and examines specific biomes. Each chapter includes student-centred activities, case studies and suggestions for field studies.</p>	1010 1020 1050 1070	2020 2040 2070 2090	3040 3090
LRDC	<p><i>Nature Alberta: An Illustrated Guide to Common Plants and Animals.</i> James Kavanaugh. Edmonton, AB: Lone Pine Publishing, 1991.</p> <p>This book is a layman's guide to common species of plants and animals in Alberta. Descriptions, illustrations and maps are grouped for ease of reference. The material is easily understood as technical terms are kept to a minimum. While not a comprehensive overview of Alberta's flora and fauna, the book provides basic information on common species.</p>	1020 1070	2040	

## SUPPORT LEARNING RESOURCES

The following support learning resources are authorized by Alberta Education to assist in addressing some of the learner expectations of a module or components of modules.

Distributor Code	Resources	Levels/Module No.		
		1	2	3
LRDC	<p><i>Birders of a Feather: For the Birds.</i> Vancouver, BC: T.H.A. Media Distributors Ltd., 1993. Video.</p> <p>This video deals with the ecotourism dilemma in Beaverhill Lake, Mount Verde and Point Pellee. The positive and negative effects that ecotourism brings to human and natural communities are vividly portrayed.</p>		2060	
FEESA	<p><i>Boreal Forest Series.</i> Friends of the Environmental Education Society of Alberta (FEESA). FEESA, An Environmental Education Society, 1993-95. Videos.</p> <p><i>Boreal Forest Issues, Boreal Forest I:</i> this 59-minute video explains the characteristics of Alberta's boreal forests, outlines the nature of forest use in society today, and examines strategies used in forest management. Issues surrounding the use of our boreal forests are analyzed from both economic and environmental perspectives. The need for responsible decision making in forestry-related areas is emphasized throughout the video.</p> <p><i>Between the Stands, Boreal Forest II:</i> represents the second of three, one hour videos that provide insight into the importance of issues related to the development and use of the largest of Alberta's and Canada's terrestrial ecosystems - the Boreal Forest. The video presents the very different viewpoints of two young, well-educated and well-meaning people on issues of ecosystem-based management, forest regeneration, forest harvest and conservation.</p> <p><i>A Forest of Values, Boreal Forest III:</i> represents the third video in a three-part series that provide insight into issues related to the development and use of the Boreal Forest. The video presents the viewpoints of two people with different backgrounds who live in a community affected by large-scale forest development which is helping to redefine community and lifestyle values. Topics addressed include habitat, decision making, traditional values and economics.</p> <p>Utilization guides are available (see teaching resources).</p>	1010 1050	2020 2040 2060 2090	3020 3050 3060 3090
ACC	<p><i>Career and Technology Studies: Key Concepts.</i> Edmonton, AB: ACCESS: The Education Station.</p> <p>A series of videos and utilization guides relevant to all CTS strands. The series consists of: <i>Anatomy of a Plan; Creativity; Electronic Communication; The Ethics Jungle; Go Figure; Innovation; Making Ethical Decisions; Portfolios; Project Planning; Responsibility and Technical Writing.</i></p>	all	all	all

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# Support Learning Resources (continued)

Distributor Code	Resources	Levels/Module No.		
		1	2	3
ENCA	<p><i>Conservation of Canadian Prairie Grasslands: A Landowner's Guide.</i> Garry C. Trottier. Edmonton, AB: Environment Canada, 1992. Booklet.</p> <p>This guide is intended for private landowners and public land leaseholders on the prairies. It provides ideas on how to retain native grass holdings in a productive condition for the benefit of land-users and wildlife. The guide promotes grassland conservation and illustrates the resulting benefits. The book challenges the idea of conversion of native grassland, and explains how economic return is possible without conversion.</p>	1020 1030	2030 2040	
LRDC	<p><i>Forest is in Our Hands, The.</i> Edmonton, AB: Caterpillar Incorporated, 1991. Video.</p> <p>This video explores the need to make informed decisions regarding our use of forests and other natural resources. Information is presented in three parts: "Tending the Forest" (describes the science of silviculture); "Sharing the Forest" (explores the concept of multiple-use management); and "Sustaining the Forest" (examines the crucial area of decision making). Viewers are reminded that there are at least two sides to every issue. A print component entitled "Forest Facts: The Forest is in our Hands" is available in booklet format.</p>		2060	
ENCA	<p><i>From the Mountains to the Sea – A Journey in Environmental Citizenship.</i> Ottawa, ON: Environment Canada, 1992. Booklet.</p> <p>This student booklet provides a brief directory of various "eco" activities that can be implemented in the community, home and/or school.</p>		2090	3020 3090
LRDC	<p><i>Hard Edge, The.</i> CTE (Carlton). T.H.A. Media Distributors Ltd, 1990. Video.</p> <p>Southern African nations sharing the Zambesi river basin have agreed to an ambitious plan to conserve the region's natural resources. With this aim, aid projects in Zambia and Zimbabwe are trying to reconcile the needs of wildlife and people. A television "Trust for the Environment" program.</p>	1050	2020 2040 2060 2090	3050
ACC	<p><i>If You Build It.</i> Winnipeg, MB: Ducks Unlimited Canada, 1991. Video (21 minutes).</p> <p>This video discusses the importance of wetlands in maintaining the health of ecosystems. An overview of human factors involved in wetland restoration is provided.</p>	1010 1050	2020 2030 2060 2090	3020 3050 3060

## Support Learning Resources (continued)

Distributor Code	Resources	Levels/Module No.		
		1	2	3
KFL	<p><i>In Wildness: A Flight of Deer; A Pageant of Grouse; The Great Bears.</i> Karvonen Films Ltd. Three videos available on loan from Alberta Environmental Protection (Fish and Wildlife Services).</p> <p><i>A Flight of Deer</i> was filmed in the mountains, prairies, and aspen parklands of Alberta. It investigates the lives and habitat of mule and whitetail deer. Biologists conduct a deer management survey. The importance of predators and scavengers is discussed.</p> <p><i>A Pageant of Grouse</i> investigates the unusual mating habits of several members of the grouse family. The video focuses attention on: communal displays of prairie chicken, sharp-tailed and sage grouse in open grasslands; the solitary displays of ruffed, spruce and blue grouse in forest clearings; and the small white-tailed ptarmigan of the arctic tundra.</p> <p><i>The Great Bears</i> looks at the two species of bears in North America: the black and the grizzly. The greater part of the video is devoted to the grizzly. Habitat, range (past and present), appearance and habits are all thoroughly examined for the grizzly. The video takes a close look at habitat destruction and its affect on the animals.</p> <p>"<i>The World of the Wily Black Bear</i>" introduces you to the most prosperous panhandler of the wild - the black bear. The video provides a factual account of this animals habitat and range, physical characteristics, social behavior, eating habits, predators, prey and lifecycle. Also explains are methods by which researchers obtain information enabling them to study this massive carnivore. The video aptly communicates the many different images generated by this creature through its interaction with a wide spectrum of the public (60 minutes).</p> <p>Note: This video references the practice of hunting black bears over bait. It should be explained to students that this practice, although controversial, is legal in Alberta in special circumstances and areas of the province as permitted by the Alberta Environmental Protection Agency.</p>	1010	2040	3050
		1020	2060	3090
		1050	2090	
ACC	<p><i>Life Cycle of Waterfowl.</i> Winnipeg, MB: Ducks Unlimited Canada, 1991. Video (24 minutes).</p> <p>This video discusses the importance of waterfowl as a natural resource, and the habitat features that make Alberta a primary area for waterfowl production. Provides a basic understanding of the life history and ecology of waterfowl. Patterns of duck migration routes are discussed.</p>	1010	2020	
		1020	2040	
		1050	2060	



# Support Learning Resources (continued)

Distributor Code	Resources	Levels/Module No.		
		1	2	3
ACP	<p><i>Nature's Legacy: A Southwestern Safari.</i> Randy Tomiuk Productions Ltd./Wildhorse Productions/R&amp;L Peregrine Productions/Amoco Petroleum Co. Ltd., 1995. Video.</p> <p>Examines the wildlife of Southwestern Alberta. Most of the region's shorebirds, prairie birds and raptors are shown. Some mammals are also examined. The emphasis is on identification and appreciation. A teacher's resource guide is available.</p>	1020	2040	
ACP	<p><i>Nature's Legacy: Alberta's Grasslands and Parklands.</i> Randy Tomiuk Productions Ltd./ Wildhorse Productions/R&amp;L Peregrine Productions/Amoco Petroleum Co. Ltd., 1996. Video.</p> <p>This video describes the location, general features, history and unique wildlife common to two of Alberta's natural regions, the grasslands and parklands. Through natural photography and interviews, the video examines ecosystem dynamics within each natural region. Clearly, wildlife species shown in the video will only continue to exist if natural habitats within the grasslands and parklands are maintained. A teacher's resource guide is available.</p>	1020	2040	
ACP	<p><i>Nature's Legacy: Prairie Wildlife: A Complex Web.</i> Randy Tomiuk Productions Ltd./ Wildhorse Productions/R&amp;L Peregrine Productions/Amoco Petroleum Co. Ltd., 1996. Video.</p> <p>This video introduces you to an often misunderstood creature that seems common, ordinary and of little value. Yet the Richardson's Ground Squirrel, or gopher, is vital to the survival of many prairie predators. The video examines the importance of this species to the delicate harmony of wildlife in Alberta's prairie grassland. A teacher resource guide is available.</p>	1020	2040	
ACP	<p><i>Nature's Legacy: Wildlife at Risk.</i> Randy Tomiuk Productions Ltd./Wildhorse Productions/R&amp;L Peregrine Productions/Amoco Petroleum Co. Ltd., 1996. Video.</p> <p>This video describes the five categories of wildlife species at risk in Canada (i.e., vulnerable, threatened, endangered, extirpated, extinct). Through natural photography and interviews, the video examines local wildlife species within each category, and factors contributing to their current status. Also explored are programs for the sustainable management of local species at risk. A teacher resource guide is available.</p>	1020	2040	

# Support Learning Resources (continued)

Distributor Code	Resources	Levels/Module No.		
		1	2	3
LRDC	<p><i>New Leaf, A: Real Sustainability for the Boreal Forest.</i> Karen Baitgailis and Barbara Allard. Western Canada Wilderness Committee, 1993. Video.</p> <p>This video proposes a plan for Alberta's boreal forest. Current forestry mega projects are shown to be unsustainable, both environmentally and economically. The video provides a model for integrated, small scale, labour intensive economic development for northern Alberta that includes nature tourism, horse and machine selective logging, small sawmills, value-added wood products manufacturing and clean pulp mills. The focus of this video supports environmental concerns taking precedence over economic development. Teachers should be prepared to provide a balance in perspective.</p>		2040 2090	3020 3090
MLP	<p><i>Night Moves: Owls in Fact and Fantasy.</i> Missing Link Productions Inc., 1995. Video.</p> <p>This video examines the structural, physiological and behavioural adaptations of owls. It provides background information regarding the history and mystery of owls, explores habits of the Great Grey Owl in Northern Canada, and follows the burrowing Owl to its winter home in Mexico. The program provides information suited to species research, issue analysis and wildlife management.</p>	1010 1020 1050	2020 2040 2060 2090	3020 3040 3050 3090
LRDC	<p><i>One Minute Readings: Issues in Science, Technology and Society.</i> R.F. Brinckerhoff. Don Mills, ON: Addison-Wesley Publishing Company, 1992. Textbook.</p> <p>This book contains readings and questions related to issues in science, technology and society. Applications of science are raising difficult questions and are creating problems that cannot be answered. The book is intended to give students practice in making the kinds of decisions they will experience in life. Students need a knowledge of science to find the best possible answers. An teacher's manual is available.</p>		2090	3020 3090
LRDC	<p><i>Peregrines (For The Birds).</i> Vancouver, BC: T.H.A. Media Distributors Ltd., 1993. Video.</p> <p>This video outlines what is being done to rebuild a failing population of falcons in Alberta.</p>		2040 2060 2090	3020 3090
LRDC	<p><i>Place For Wildlife, A: A Way Is No Longer There.</i> Edmonton, AB: ACCESS: The Education Station, 1990. Video.</p> <p>This video was produced with the goal of increasing public understanding of pressures facing Canadian wildlife; in particular, the continuing loss of habitat. The program features "A Way Is No Longer There", an original song about the common fate of wildlife and humans in our changing environment. A utilization guide in print format is available to teachers.</p>	1050 1070	2060 2070 2090	3090

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# Support Learning Resources (continued)

Distributor Code	Resources	Levels/Module No.		
		1	2	3
ENCA	<p><i>Prairie Habitat: A Prospectus.</i> Ottawa, ON: North American Waterfowl Management Plan, Environment Canada, 1986. Booklet.</p> <p>This document encourages Canadian/USA co-operation in land conservation programs in order to enhance/restore waterfowl and other wildlife habitat.</p>		2060	3040 3050 3060
ACC	<p><i>Precarious Perch: The Wood Stork Story.</i> Georgia Dept. Natural Resources. New Dimensions Media, 1994. Video.</p> <p>This video explains reasons for the dramatic decline of wood stork populations in the United States. It captures the daily routine of this endangered species and those environmental factors threatening its survival. Provides a useful comparative to endangered species in other parts of the world.</p>	1020 1050	2020 2040 2060	
ENCA	<p><i>Priority Migratory Bird Habitats of Canada's Prairie Provinces.</i> Edmonton, AB: Environment Canada, 1990. Booklet.</p> <p>This booklet provides lists, maps and tables of important (ranked) habitat areas and sites for the staging, moulting and breeding of migratory birds. The book also provides information about endangered, rare and threatened bird habitats.</p>		2060	3040 3050 3060
ACC	<p><i>Run, Sockeye, Run: The Life Cycle of the Sockeye Salmon.</i> Insights and Sound Creations. Moving Images Distribution, 1995.</p> <p>In this video a computer animated salmon coaches a "team" of sockeye getting ready to embark on the arduous upstream journey to their spawning grounds. The salmon prepares them for what lies ahead by detailing the amazing life cycle of the Adam's River sockeye. The video features spectacular footage of the salmon run up the Fraser River, underwater closeups of spawning activities including males battling for the opportunity to mate, and a birth sequence of mature salmon embryos.</p>	1020 1080	2040 2060 2090	
LRDC	<p><i>Shelters.</i> N. Kelba, et al. Calgary, AB: Calgary Board of Education, 1983. Booklet.</p> <p>This booklet develops knowledge of planned and emergency shelters essential to outdoor experiences. Topics addressed include site selection, summer and winter constructed shelters, tents, bivouac sacks, improvised and permanent shelters.</p>	1030	2030	

## Support Learning Resources (continued)

Distributor Code	Resources	Levels/Module No.		
		1	2	3
LRDC	<p><i>Singing In The Rain Forest (Warblers) For The Birds.</i> Vancouver, BC.: T.H.A. Media Distributors Ltd., 1993. Video.</p> <p>This video describes the plight of many North American (Boreal) songbirds. Warblers are the main focus of attention. It provides a good overview of the birds' life cycle and migratory patterns. The video should be viewed with the understanding that many factors have attributed to the warblers' population decline, (e.g., forest fires, urban expansion, agriculture).</p>	1070	2040 2060 2090	3090
LRDC	<p><i>Snow Camping: The Complete Guide to Enjoying the Back Country.</i> J.A. Creore. Lone Pine Publishing, 1992.</p> <p>This book explains how to camp in the winter, even in the snow, and enjoy it. Topics include choosing the proper equipment and clothing, food preparation, shelter, trip planning and survival, loading a pack and dealing with emergencies (e.g., injury, hypothermia, avalanches). The author is a recognized expert and has many trip stories and interesting suggestions to share.</p>	1030	2030	
LRDC	<p><i>St. John Ambulance Knots and Whatnots: First Aid in the Wilderness Course Supplement.</i> St. John Ambulance, 1996.</p> <p>This well illustrated booklet provides information and skills that will enhance an individual's ability to provide care in a remote setting when removed from medical aid. The book deals with pre-trip planning, wilderness skills, animals to avoid and medical evacuation. The content complements the training program "First Aid in the Wilderness".</p>	1030 1070 1080	2030 2070	
LRDC	<p><i>St. John Ambulance Official Wilderness First-Aid Guide.</i> W. Merry. St. John Ambulance. McClelland &amp; Stewart Inc., 1996.</p> <p>This book is a comprehensive guide to meeting the special challenge of a medical emergency in the wilderness areas of the northern U.S., Canada, and all other regions with a similar range of weather conditions. It takes you step-by-step through vital first-aid procedures, using language that is easy to understand and more than 130 illustrations. It contains information on cold exposure, bear attacks, dental emergencies, burns, gunshot wounds, broken bones, cleaning contaminated wounds and mushroom, berry and food poisoning.</p>	1030 1070 1080	2030 2070	
LRDC	<p><i>This Living World: The Forest.</i> Edmonton, AB: Recreation, Parks and Wildlife Foundation, 1992. Video.</p> <p>The video presents a historical perspective on the development of forests and the forest industry in Canada. Because forests provide homes for wildlife and serve many uses for humans, it is necessary to protect and conserve them.</p>	1050 1070	2060 2070 2090	3090



## Support Learning Resources (continued)

Distributor Code	Resources	Levels/Module No.		
		1	2	3
LRDC	<p><i>This Living World: Wildlife Habitat.</i> Edmonton, AB: Recreation, Parks and Wildlife Foundation, 1992. Video.</p> <p>This video informs viewers of the importance of "habitat" for living things. Interviews provide insight on issues concerning wildlife and its habitat (e.g., the need for ecological literacy, how habitat affects quality of life, the worldwide disappearance of natural habitats).</p>		2040 2060 2090	3020 3040 3050 3060 3090
LRDC	<p><i>Trees.</i> N. Kelba, et al. Calgary, AB: Calgary Board of Education, 1992. Booklet.</p> <p>This booklet provides a variety of environmental investigations that are suited to the classroom and school yard. The investigations involve students in hands-on and participatory learning situations.</p>	1020 1030	2030 2040	
DUCK	<p><i>Wetland Environments.</i> Lloyd Pearce. Edmonton, AB: Ducks Unlimited Canada, 1991. Kit.</p> <p>This educational kit addresses the following topics: wetlands ecology; wetlands habitats; wetland and waterfowl; wetland conservation and wetland environmental issues. The central focus is on problem-oriented investigation involving research, experimental procedure and field experiences. The kit includes student materials, teacher notes and video resources.</p>	1010 1020 1070	2040 2090	3020 3050 3060 3090
ENCA	<p><i>Wildlife Habitat: A Handbook for Canada's Prairies &amp; Parklands.</i> Edmonton, AB: Canadian Wildlife Service, Environment Canada, 1981. Booklet.</p> <p>This handbook provides suggestions for habitat improvement, management and development (both terrestrial and aquatic). The booklet deals with minor wildlife problems, legal concerns and co-operating agencies.</p>		2040 2090	3040 3090
ENCA	<p><i>Wildlife Policy for Canada, A.</i> Ottawa, ON: Canadian Wildlife Service, Environment Canada, 1990. Booklet.</p> <p>This document is an abridged version of provincial, federal, territorial and non-governmental policies and programs that affect wildlife.</p>	1010 1050 1070	2020 2070	3050 3060
LRDC	<p><i>Working With Whales.</i> Pickford. T.H.A. Media Distributors Ltd., 1993. Video.</p> <p>This compelling documentary examines the moral issues surrounding the capture and exhibition of whales by aquariums. Archival footage is used to trace the often cruel history of whale captivity, documenting numerous incidents where both whales and trainers were injured or killed. This video serves as an excellent starting point for discussion about the morality of confining wild animals, the difference between education and entertainment, and our relationship to nature.</p>	1050	2060 2090	3050

## TEACHING RESOURCES

The following support learning resources are authorized by Alberta Education to assist in addressing some of the learner expectations of a module or components of modules.

Distributor Code	Resources	Levels/Module No.		
		1	2	3
FEESA	<p><i>Boreal Forest Series.</i> Edmonton, AB: Friends of the Environmental Education Society of Alberta (FEESA), 1993/95. Utilization Guides.</p> <p>See Support Learning Resources for annotation and module correlation.</p>			
LRDC	<p><i>Ecology Studies of Lakes in Alberta.</i> Edmonton, AB: Alberta Environment, 1988. Resource materials include book and teacher's package, 1989.</p> <p>This print package deals with the ecology of freshwater environments. The unit of study discusses human impact on lake environments and involves students in the methods and technology employed to study lakes. Workshops on how to use the materials are provided by Alberta Environment.</p>	1010 1080	2040	3040
LRDC	<p><i>Ecosystems.</i> B. Herridge and B. Chernin. Gage Educational Publishing, 1995. Teacher's Resource.</p> <p>See Basic Learning Resources for annotation and module correlation.</p>			
LRDC	<p><i>Importance of Wildlife to Canadians in 1987, The: Trends in Participation in Wildlife-Related Activities, 1981 to 2006.</i> F.L. Filion, et al. Ottawa, ON: Environment Canada, Canadian Wildlife Service, 1988. Booklet.</p> <p>This booklet addresses the consumptive and non-consumptive use of wildlife. It provides factual content that would be useful for individual student research and investigation.</p>		2020 2040 2060 2090	3020 3040 3050 3060 3090
LRDC	<p><i>National Occupational Standards For the Canadian Tourism Industry: Outdoor Guide.</i> Edmonton, AB: Alberta Tourism Education Council, 1991. Teacher booklet.</p> <p>Contains competency standards that the tourism industry deems necessary for effective performance in the occupation of Outdoor Guide. The standards establish a base from which certification programs can be developed.</p>	1030	2030	
ACP	<p><i>Nature's Legacy: A Southwestern Safari.</i> Randy Tomiuk Productions Ltd./Wildhorse Productions/R&amp;L Peregrine Productions/Amoco Petroleum Co. Ltd., 1995. Teacher's Resource Guide.</p> <p><b>Note:</b> Ensure that a balanced viewpoint is presented regarding the drainage of wetlands.</p> <p>See Support Learning Resources for annotation and module correlation.</p>			

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# Teaching Resources (continued)

Distributor Code	Resources	Levels/Module No.		
		1	2	3
ACP	<p><i>Nature's Legacy: Alberta's Grasslands and Parklands.</i> Randy Tomiuk Productions Ltd./ Wildhorse Productions/R&amp;L Peregrine Productions/Amoco Petroleum Co. Ltd., 1996. Teacher's Resource Guide.</p> <p>See Support Learning Resources for annotation and module correlation.</p>			
ACP	<p><i>Nature's Legacy: Prairie Wildlife: A Complex Web.</i> Randy Tomiuk Productions Ltd./ Wildhorse Productions/R&amp;L Peregrine Productions/Amoco Petroleum Co. Ltd., 1996. Teacher's Resource Guide.</p> <p>See Support Learning Resources for annotation and module correlation.</p>			
ACP	<p><i>Nature's Legacy: Wildlife at Risk.</i> Randy Tomiuk Productions Ltd./Wildhorse Productions/R&amp;L Peregrine Productions/Amoco Petroleum Co. Ltd., 1996. Teacher's Resource Guide.</p> <p>See Support Learning Resources for annotation and module correlation.</p>			
SSC	<p><i>North American Waterfowl Management Plan, A Strategy for Cooperation.</i> Ottawa, ON: Minister of Supply and Services Canada, 1986. Booklet.</p> <p>Because of alarming decreases in some waterfowl populations, a co-operative effort between Canadian and USA governments has resulted in the formation of North American Waterfowl Management Plan (NAWMP). This plan is a guideline for government and private organizations to focus on habitat reclamation and waterfowl management.</p>			3050 3060
LRDC	<p><i>One Minute Readings: Issues in Science, Technology and Society.</i> R.F. Brinckerhoff. Don Mills, ON: Addison-Wesley Publishing Company, 1992. Teacher's Manual.</p> <p>This book contains readings and questions related to issues in science, technology and society. Applications of science are raising difficult questions and are creating problems that cannot be answered. The book is intended to give students practice in making the kinds of decisions they will experience in life. Students need a knowledge of science to find the best possible answers.</p>		2090	3020 3090

# Teaching Resources (continued)

Distributor Code	Resources	Levels/Module No.		
		1	2	3
LRDC	<p><i>Orienteering, Level I.</i> R. Robertson. Calgary, AB: Calgary Board of Education, 1982. Booklet.</p> <p>This booklet is designed to develop locomotor skills, map skills and space/time skills as they relate to orienteering. By using a variety of maps, the student's ability to "find his/her way" is developed. Activities for rural and urban geographical areas have been included.</p>	1030	2030	
LRDC	<p><i>Orienteering, Level II.</i> R. Robertson. Calgary, AB: Calgary Board of Education, 1980. Booklet.</p> <p>This booklet is designed to add the use of a compass to the fundamental orienteering skills of map reading, map making and map orientation. Activities address physical fitness and skills, knowledge and understanding, social skills, attitudes and appreciation. The material has been prepared for junior and senior high school students.</p>	1030	2030	
LRDC	<p><i>Personal Equipment.</i> N. Kelba, et al. Calgary, AB: Calgary Board of Education, 1983. Booklet.</p> <p>This booklet examines the role of personal equipment (its selection and use) in safe and comfortable outdoor experiences. Topics addressed include temperature regulation, essential equipment for various situations, selection of quality equipment, sources of equipment, care and maintenance of equipment, packing equipment and safety considerations.</p>	1030	2030	
LRDC	<p><i>Project Wild Activity Guide.</i> Ottawa, ON: Canadian Wildlife Federation, 1993.</p> <p>This book provides a collection on interdisciplinary environmental education materials and activities that emphasize wildlife conservation and environmental stewardship. Activities are indexed by topic, grade, subject and skill, and foster responsible behaviour and constructive actions concerning wildlife and the environment.</p>	all	all	all
LRDC	<p><i>Trip Planning.</i> N. Kelba, et al. Calgary, AB: Calgary Board of Education, 1984. Booklet.</p> <p>This booklet outlines essential steps in planning successful outdoor education experiences. Planning should be based on an understanding of the potential hazards in the wilderness environment. The isolation factor of an outdoor trip shows the need for knowledge of emergency response, first aid and evacuation procedures. The booklet provides basic knowledge for the safety and enjoyment of outdoor experiences.</p>	1030	2030	



# WILDLIFE RESOURCES

## THEME CODE:

- A. Social & Cultural Perspectives
- B. Technology & Applications
- C. Management & Conservation

## STATUS CODE:

- B - Basic
- S - Support
- T - Teaching
- O - Other

## LEVEL CODE:

- 1 - Introductory
- 2 - Intermediate
- 3 - Advanced

## FORMAT CODE:

- p - Print
- v - Video
- s - Software

## JR/SR HIGH CODE:

- J - Junior High
- S - Senior High

LEVEL				1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3
THEME				A	A	A	C	C	C	A	A	B	C	C	C	A	B	C	C	C
	Format	Status	Junior/Senior High	What Is Wildlife?	Natural History of Wildlife	Outdoor Experiences 1	Taking Responsibility	Hunting & Game Management 1	Angling & Fish Management	Measuring the Value	Outdoor Experiences 2	Wildlife Spaces & Species	Interactions	Hunting & Game Management 2	Issues in Wildlife 1	Making a Difference	Wildlife Research	Wildlife Management 1	Wildlife Management 2	Issues in Wildlife 2
Module Number				1010	1020	1030	1050	1070	1080	2020	2030	2040	2060	2070	2090	3020	3040	3050	3060	3090
Alberta Conservation and Hunter Education	p	B	J/S		X	X		X				X	X	X		X				
Alberta Fishing Education Program	p	B	J/S		X	X		X	X					X		X				
Alberta Wildlife Viewing Guide	p	B	J/S		X			X				X								
Birders of a Feather: For the Birds	v	S	S										X							
Boreal Forest Series				X			X			X		X	X		X	X		X	X	X
Boreal Forest Issues, Boreal Forest I	v	S	J/S																	
Between the Stands, Boreal Forest II	v	S	J/S																	
A Forest of Values, Boreal Forest III	v	S	J/S																	
Utilization Guides	p	T	J/S																	
Conservation of Canadian Prairie Grasslands: A Landowner's Guide	p	S	J/S		X	X					X	X								
Ecology Studies of Lakes in Alberta	p	T	J/S	X					X			X					X			
Ecosystems				X	X		X			X		X	X		X	X		X		X
Text	p	B	J/S																	
Teacher's Resource	p	T	J/S																	
Forest is in Our Hands, The	v	S	S										X							
From the Mountains to the Sea - A Journey in Environmental Citizenship	p	S	S												X	X				X
Global Environment, The	p	B	J/S				X						X		X	X				X
Hard Edge, The	v	S	J/S				X			X		X	X		X			X		
If You Build It	v	S	J/S	X			X			X	X		X		X	X		X	X	
Importance of Wildlife to Canadians In 1987, The: Trends in Participation in Wildlife-Related Activities, 1981 to 2006	p	T	S							X		X	X		X	X	X	X	X	X
Investigating Aquatic Ecosystems	p	B	J/S	X	X				X			X	X				X			
Investigating Terrestrial Ecosystems	p	B	J/S	X	X		X	X		X		X		X	X		X			X
In Wildness:				X	X		X					X	X		X			X		X
A Flight of Deer	v	S	J/S																	
A Pageant of Grouse	v	S	J/S																	
The Great Bears	v	S	J/S																	
World of The Wily Black Bear	v	S	J/S																	
Life Cycle of Waterfowl	v	S	J/S	X	X		X			X		X	X							
National Occupational Standards for the Canadian Tourism Industry: Outdoor Guide	p	T	J/S			X					X									
Nature Alberta: An Illustrated Guide to Common Plants and Animals	p	B	J/S		X			X				X								
Nature's Legacy: A Southwestern Safari					X							X								
Video	v	S	J/S																	
Teacher's Resource Guide	p	T	J/S																	
Nature's Legacy: Alberta's Grasslands and Parklands					X							X								
Video	v	S	J/S																	
Teacher's Resource Guide	p	T	J/S																	

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THEME				A	A	A	C	C	C	A	A	B	C	C	C	A	B	C	C	C
	Format	Status	Junior/Senior High	What Is Wildlife?	Natural History of Wildlife	Outdoor Experiences 1	Taking Responsibility	Hunting & Game Management 1	Angling & Fish Management	Measuring the Value	Outdoor Experiences 2	Wildlife Spaces & Species	Interactions	Hunting & Game Management 2	Issues in Wildlife 1	Making a Difference	Wildlife Research	Wildlife Management 1	Wildlife Management 2	Issues in Wildlife 2
Module Number				1010	1020	1030	1050	1070	1080	2020	2030	2040	2060	2070	2090	3020	3040	3050	3060	3090
Nature's Legacy: Prairie Wildlife: A Complex Web					X							X								
Video	v	S	J/S																	
Teacher's Resource Guide	p	T	J/S																	
Nature's Legacy: Wildlife at Risk					X							X								
Video	v	S	J/S																	
Teacher's Resource Guide	p	T	J/S																	
New Leaf, A : Real Sustainability for the Boreal Forest	v	S	S									X			X	X				X
Night Moves: Owls in Fact and Fantasy	v	S	J/S	X	X		X			X		X	X		X	X	X	X		X
North American Waterfowl Management Plan, A Strategy for Cooperation	p	T	S															X	X	
One Minute Readings: Issues in Science, Technology and Society															X	X				X
Text	p	S	S																	
Teacher's Manual	p	T	S																	
Orienteering, Level I	p	T	J/S			X				X										
Orienteering, Level II	p	T	J/S			X				X										
Peregrines (For the Birds)	v	S	S									X	X		X	X				X
Personal Equipment	p	T	J/S			X				X										
Place For Wildlife, A: A Way is No Longer There	v	S	J/S				X	X					X	X	X					X
Prairie Habitat: A Prospectus	p	S	S										X				X	X	X	
Precarious Perch: The Wood Stork Story	v	S	J/S		X		X			X		X	X							
Priority Migratory Bird Habitats of Canada's Prairie Provinces	p	S	S										X				X	X	X	
Project Wild Activity Guide	p	T	J/S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Run, Sockeye, Run: The Life Cycle of the Sockeye Salmon	v	S	J/S		X				X			X	X		X					
Shelters	p	S	J/S			X				X										
Singing In The Rain Forest (Warblers)For the Birds	v	S	J/S					X				X	X		X					X
Snow Camping: The Complete Guide to Enjoying the Back Country	p	S	J/S			X				X										
St. John Ambulance Knots and Whatnots: First Aid in the Wilderness Course Supplement	p	S	J/S			X		X	X		X			X						
St. John Ambulance Official Wilderness First-Aid Guide	p	S	J/S			X		X	X		X			X						
This Living World: The Forest	v	S	J/S				X	X					X	X	X					X
This Living World: Wildlife Habitat	v	S	J/S									X	X		X	X	X	X	X	X
Trees	p	S	J/S		X	X				X	X									
Trip Planning	p	T	J/S			X				X										
Wetland Environments	p	S	J/S	X	X			X				X			X	X		X	X	X
Wildlife Habitat: A Handbook for Canada's Prairies & Parklands	p	S	S									X			X		X			X
Wildlife Policy for Canada, A	p	S	J/S	X			X	X		X				X				X	X	
Working With Whales	v	S	J/S				X						X		X			X		

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(1997)

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THEME				A	A	A	C	C	C	A	A	B	C	C	C	A	B	C	C	C
				What Is Wildlife?	Natural History of Wildlife	Outdoor Experiences 1	Taking Responsibility	Hunting & Game Management 1	Angling & Fish Management	Measuring the Value	Outdoor Experiences 2	Wildlife Spaces & Species	Interactions	Hunting & Game Management 2	Issues in Wildlife 1	Making a Difference	Wildlife Research	Wildlife Management 1	Wildlife Management 2	Issues in Wildlife 2
Module Number	Format	Status	Junior/Senior High	1010	1020	1030	1050	1070	1080	2020	2030	2040	2060	2070	2090	3020	3040	3050	3060	3090
<b>OTHER RESOURCES</b>																				
Alberta's Threatened Wildlife Series	p	O	J/S	X	X		X			X		X			X			X	X	X
Alberta's Watchable Wildlife Series	p	O	J/S		X			X				X		X						
Animal Tracks of Western Canada	p	O	J/S	X		X					X	X								
Atlas of Breeding Birds of Alberta	p	O	J/S		X			X				X		X						
Benefits of Wildlife, The	p	O	S							X						X				
Butterflies of Alberta	p	O	J/S		X							X								
Canoeing	p	O	J/S			X					X									
Canoe Tripping	p	O	J/S			X					X									
Caring For the Land Teaching Kit (Grades 7-9)	p	O	J				X													
Compact Guide to Birds of the Rockies, The	p	O	J/S	X	X	X					X	X								
Compact Guide to Wildflowers of the Rockies	p	O	J/S	X	X	X					X	X								
Dictionary of Natural Resource Management	p	O	J/S	X			X			X					X	X	X	X		X
Earth Keepers: Four Keys for Helping Young People Live in Harmony With the Earth	p	O	J/S			X	X			X	X					X				
Earth Walks: Acclimatization for a Sensory Encounter with the Natural World	p	O	J/S			X	X			X	X					X				
Endangered Species in Canada	p	O	S									X	X		X					X
Environmental Citizenship Series: Nature of Canada, The: A Primer on Spaces and Species	p	O	J/S	X			X	X				X	X	X			X	X	X	
Environmental Citizenship Series: A Primer on Environmental Citizenship	p	O	J/S				X			X		X				X				
Feather Care's Volunteer Guide	p	O	S													X				
Federal Policy on Wetland Conservation, The	p	O	S								X	X					X	X		
Fifty More Things You Can Do To Save the Earth	p	O	J				X													
Fires & Stoves	p	O	J/S			X					X									
Fishes of Alberta, The	p	O	J/S		X				X			X								
Focus On Series (10 Booklets)	p	O	J/S				X								X	X				X
Framework for Alberta's Special Places, A (Natural Regions Report No. 1)	p	O	S									X			X	X				X
Freshwater Ecosystems	p	O	J/S		X	X					X	X								
Green Future: How To Make A World of Difference	p	O	S												X	X				X
Green Guide, The (Series I and II)	v	O	S									X			X	X				X
Guide to the Amphibians and Reptiles of Alberta, A	p	O	J/S		X							X								
Guide to the Common Native Trees and Shrubs of Alberta	p	O	J/S	X	X	X					X									

BEST COPY AVAILABLE

# WILDLIFE RESOURCES

## THEME CODE:

- A. Social & Cultural Perspectives
- B. Technology & Applications
- C. Management & Conservation

## STATUS CODE:

- B - Basic
- S - Support
- T - Teaching
- O - Other

## LEVEL CODE:

- 1 - Introductory
- 2 - Intermediate
- 3 - Advanced

## FORMAT CODE:

- p - Print
- v - Video
- s - Software

## JR/SR HIGH CODE:

- J - Junior High
- S - Senior High

LEVEL				1	1	1	1	1	1	2	2	2	2	2	2	3	3	3	3	3
THEME				A	A	A	C	C	C	A	A	B	C	C	C	A	B	C	C	C
	<i>Format</i>	<i>Status</i>	<i>Junior/Senior High</i>	What Is Wildlife?	Natural History of Wildlife	Outdoor Experiences 1	Taking Responsibility	Hunting & Game Management 1	Angling & Fish Management	Measuring the Value	Outdoor Experiences 2	Wildlife Spaces & Species Interactions	Hunting & Game Management 2	Issues in Wildlife 1	Making a Difference	Wildlife Research	Wildlife Management 1	Wildlife Management 2	Issues in Wildlife 2	
Module Number				1010	1020	1030	1050	1070	1080	2020	2030	2040	2060	2070	2090	3020	3040	3050	3060	3090
Hinterland Who's Who (Series)	p	O	J/S		X			X				X		X						
How Green Is Your School?	p	O	J/S				X								X	X				X
Human Environments	p	O	J/S			X					X		X							
Identification Guide to Alberta Aquatic Plants, An	p	O	J/S	X	X				X			X								
Kananaskis Country Environmental Education Teaching Activity Guide: Earth Science	p	O	J/S			X					X									
Land Conservation Education Program	p	O	J/S				X						X		X	X				X
Mammals of the Northern Rockies	p	O	J/S		X							X								
Mosses Lichens & Ferns of Northwest North America: A Photographic Field Guide	p	O	J/S		X	X					X	X								
Natural Regions of Alberta: Poster Series	p	O	J/S	X	X							X								
Navigation	p	O	J/S			X					X									
Nest Boxes for Alberta Birds	p	O	J		X		X													
Nutrition	p	O	J/S			X					X									
Planting Trees for Wildlife	p	O	J/S				X					X	X			X				
Sunship Earth: An Acclimatization Program for Outdoor Learning	p	O	J/S			X	X			X	X					X				
Trees and Shrubs of Alberta: A Habitat Field Guide	p	O	J/S	X	X	X					X	X								
Water in Alberta: The Living Flow	p	O	S									X			X		X			X
Water Quality Questions: The Nature and Importance of Water Quality Variables in Alberta	p	O	J/S				X						X		X	X				X
Wetlands	p	O	J/S				X								X			X	X	X
What We Can Do For Our Environment: Hundreds of Things To Do Now	p	O	J/S				X								X	X				X
Working With Wildlife - A Volunteers Directory	p	O	S													X				



## OTHER RESOURCES

These titles are provided as a service only to assist local jurisdictions to identify resources that contain potentially useful ideas for teachers. Alberta Education has done a preliminary review of the resources. However, the responsibility to evaluate these resources prior to selection rests with the user, in accordance with any existing local policy.

Distributor Code	Other Resources	Levels/Module No.		
		1	2	3
EPPC	<i>Alberta's Threatened Wildlife Series.</i> Edmonton, AB: Alberta Environmental Protection. Factsheet Series.	1010	2020	3050
		1020	2040	3060
		1050	2090	3090
EPPC	<i>Alberta's Watchable Wildlife Series.</i> Edmonton, AB: Alberta Environmental Protection. Pamphlet series.	1020	2040	
		1070	2070	
LLP	<i>Animal Tracks of Western Canada.</i> J.E. Barwise. Lone Pine Publishing, 1989.  An easy-to-use guide to the tracks of common mammals in Alberta. This book contains a key to tracks as well as brief descriptions of the animals themselves.	1020	2030	
		1030	2040	
FAN	<i>Atlas of Breeding Birds of Alberta.</i> G.P. Semenchuk. Edmonton, AB: Federation of Alberta Naturalists, 1992. Book.	1020	2040	
		1070	2070	
SSC	<i>Benefits of Wildlife, The.</i> Ottawa, ON: Canadian Wildlife Service, 1990. Booklet.		2020	3020
LLP	<i>Butterflies of Alberta.</i> J. Acorn. Lone Pine Publishing, 1993.  This guide identifies every butterfly species recorded in Alberta. Through photographs, line drawings and reference lists, butterfly species are described according to distinguishing features, flight periods, geographical ranges, behavior and preferred food plants.	1020	2040	
CBE	<i>Canoeing.</i> B. Hans, et al. Calgary, AB: Calgary Board of Education, 1980. Booklet.	1030	2030	
CBE	<i>Canoe Tripping.</i> N. Kelba, et al. Calgary, AB: Calgary Board of Education, 1983. Booklet.	1030	2030	

# Other Resources (continued)

Distributor Code	Other Resources	Levels/Module No.		
		1	2	3
ENED	<i>Caring For the Land Teaching Kit</i> (Grades 7–9). Edmonton, AB: Alberta Environmental Protection, Education Branch, 1993. Teacher's guide and student material.	1050		
LLP	<i>Compact Guide to Birds of the Rockies, The</i> . G. Holroyd and H. Coneybeare. Lone Pine Publishing, 1989.  Over 100 birds are described in this compact guide. Full colour illustrations accompany the text, which includes identification hints, similar species, interesting anecdotes and a comprehensive checklist of birds in the mountain parks.	1010 1020 1030	2030 2040	
LLP	<i>Compact Guide to Wildflowers of the Rockies</i> . C.D. Bush. Lone Pine Publishing, 1990.  This guide to 100 common and interesting wildflowers includes species descriptions, watercolour illustrations, line drawings and keys. Organized by habitat, this compact guide contains a glossary as well.	1010 1020 1030	2030 2040	
UBCP	<i>Dictionary of Natural Resource Management</i> . J. Dunster. UBC Press, 1996.  This dictionary provides an up-to-date and comprehensive source of natural resource management terms. It includes more than 6000 entries, extensively cross-referenced and illustrated to provide exact meanings. Encourages terminology from a wide range of disciplines and is based on information obtained from discussions with experts around the world. A useful resource for those involved in managing the planet's natural resources.	1010 1050	2020 2090	3020 3040 3050 3090
INEE	<i>Earth Keepers: Four Keys for Helping Young People Live in Harmony With the Earth</i> . Van Matre/Johnson. Calgary, AB: The Institute for Earth Education, 1987. Book.	1030 1050	2020 2030	3020
INEE	<i>Earthwalks: Acclimatization Walks for a Sensory Encounter with the Natural World (Earthwalks: Earth Magic and Snow Walks)</i> . K. Hoesse. Calgary, AB: The Institute for Earth Education, 1980. Book.  A collection of natural awareness activities which can be used as the components of a nature awareness walk.	1030 1050	2020 2030	3020
SSC	<i>Endangered Species in Canada</i> . Ottawa, ON: Canadian Wildlife Service, 1990. Brochure.		2040 2060 2090	3090

# Other Resources (continued)

Distributor Code	Other Resources	Levels/Module No.		
		1	2	3
EPPC	<i>Feather Care's Volunteer Guide.</i> Alberta Government Telephones. Edmonton, AB: Alberta Environmental Protection. Booklet.			3020
SSC	<i>Federal Policy on Wetland Conservation, The.</i> Ottawa, ON: Environment Canada, 1991. Booklet.		2040 2060	3050 3060
LRDC	<i>Fifty More Things You Can Do To Save The Earth.</i> Earthworks Group. Berkeley, California: Andrews and McMeel, 1989.	1050		
CBE	<i>Fires &amp; Stoves.</i> N. Kelba, et al. Calgary, AB: Calgary Board of Education, 1983. Booklet.	1030	2030	
UAP	<i>Fishes of Alberta, The.</i> J.S. Nelson, et al. Edmonton, AB: University of Alberta Press, 1992. Book.	1020 1080	2040	
ENED	<i>Focus On Series (Acidic Deposition, Air Quality, Environment, Greenhouse Effect, Land Reclamation, Ozone Depletion, Pesticides, Pollution, Recycling, Water Conservation).</i> Edmonton, AB: Alberta Environmental Protection, Education Branch. Booklets.	1050	2090	3020 3090
EPPC	<i>Framework for Alberta's Special Places, A (Natural Regions Report No. 1).</i> Edmonton, AB: Alberta Parks Service. Booklet.		2040 2090	3020 3090
CBE	<i>Freshwater Ecosystems.</i> N. Kelba, et al. Calgary, AB: Calgary Board of Education, 1992. Booklet.	1020 1030	2030 2040	
PBC	<i>Green Future: How To Make A World of Difference.</i> Lorraine Johnson. Markham, ON: Penguin Books, 1990. Textbook.		2090	3020 3090
ACC	<i>Green Guide, The (Series I and II).</i> Edmonton, AB: ACCESS: The Education Station, 1991. Videos.		2060 2090	3020 3090
UAP	<i>Guide to the Amphibians and Reptiles of Alberta, A.</i> A.P. Russel, et al. Edmonton, AB: University of Alberta Press, 1993. Book.	1020	2040	

# Other Resources (continued)

Distributor Code	Other Resources	Levels/Module No.		
		1	2	3
ENED	<i>Guide to the Common Native Trees and Shrubs of Alberta.</i> W. Inkpen and R. Van Eyk. Alberta Environmental Protection, Education Branch.  A guide designed to assist in the identification of the 29 most common woody plants found in Alberta. A minimal number of technical terms are used, and an illustrated glossary has been included to explain the botanical terms used. To aid identification, a written description of each tree and shrub is provided along with photographs and an illustrated line key based on leaf characteristics.	1010 1020 1030	2030	
SSC	<i>Hinterland Who's Who (Series).</i> Ottawa, ON: Canadian Wildlife Service. Monographs.	1020 1070	2040 2070	
OCV	<i>How Green Is Your School?</i> Don E. McAllister. Ottawa, ON: Ocean Voice, 1991. Booklet.	1050	2090	3020 3090
CBE	<i>Human Environments.</i> N. Kelba, et al. Calgary, AB: Calgary Board of Education, 1993. Teacher Resource Manual.	1030	2030 2060	
ENED	<i>Identification Guide to Alberta Aquatic Plants, An.</i> G.R. Burland. Alberta Environmental Protection Pesticide Management Branch, 1994.  This guide provides a simplified means of identifying aquatic plants. Consists of photographs and narrative descriptions of some of the common aquatic plants found in Alberta. Descriptions refer to easily distinguishable characteristics that permit identification to at least the genus level. A glossary is provided so as to avoid difficulty with unfamiliar terms used in the description. Photographs show plants in a natural setting as would be viewed from a boat or from the shore.	1010 1020 1080	2040	
CBE	<i>Kananaskis Country Environmental Education Teaching Activity Guide: Earth Science.</i> R. Lengsfeld, et al. Calgary, AB: Calgary Board of Education, 1987. Guidebook.	1030	2030	
ENED	<i>Land Conservation Education Program.</i> Edmonton, AB: Alberta Environmental Protection, Education Branch. Teacher's guide and student materials.	1050	2060 2090 3020 3090	
FHW	<i>Mammals of the Northern Rockies.</i> Tom J. Ulrich. Missoula, MT: Mountain Press Publishing Company, 1990. Book.	1020	2040	



Other Resources (continued)

Distributor Code	Other Resources	Levels/Module No.		
		1	2	3
LLP	<p><i>Mosses Lichens &amp; Ferns of Northwest North America: A Photographic Field Guide.</i> D. Witt. Lone Pine Publishing, 1988.</p> <p>Over 370 species of mosses, lichens, ferns and liverworts are fully described. The guide provides illustrations, systematic keys and notes on habitat, range and similar species.</p>	1020 1030	2030 2040	
EPPC	<p><i>Natural Regions of Alberta: Poster Series.</i> Edmonton, AB: Alberta Environmental Protection, 1990. Posters and manual.</p>	1010 1020	2040	
ENCA	<p><i>Environmental Citizenship Series: Nature of Canada, The: A Primer on Spaces and Species.</i> Ottawa, ON: Environment Canada, 1993. Booklet.</p> <p>This resource is designed to provide information that will help Canadians make environmentally responsible decisions. It provides short information anecdotes, maps and charts, and questions and answers designed to promote critical thinking. The resource includes activities that can be initiated in the classroom or community. The book is one of a series of Environmental Citizenship Primers.</p>	1010 1050 1070	2060 2070 2090	3050 3060 3090
ENCA	<p><i>Environmental Citizenship Series: A Primer on Environmental Citizenship.</i> . Ottawa, ON: Environment Canada, 1993. Booklet.</p> <p>This resource is designed to provide information that will help Canadians make environmentally responsible decisions. It provides short informational anecdotes, maps and charts, and questions/answers designed to provide critical thinking. The resource includes information on ecological processes, relationships of human societies with the environment, and key environmental issues that Canadians face today. The book is one of a series of Environmental Citizenship Primers.</p>	1050	2020 2060	3020
CBE	<p><i>Navigation.</i> Kelba, et al. Calgary, AB: Calgary Board of Education, 1983. Booklet.</p>	1030	2030	
EBF	<p><i>Nest Boxes For Alberta Birds.</i> Bryan Shantz, et al. Red Deer, AB: Ellis Bird Farm Ltd., 1984. Booklet.</p>	1020 1050		
CBE	<p><i>Nutrition.</i> N. Kelba, et al. Calgary, AB: Calgary Board of Education, 1983. Booklet.</p>	1020	2030	
SSC	<p><i>Planting Trees For Wildlife.</i> Ottawa, ON: Prairie Farm Rehabilitation Administration, Agriculture Canada. Booklet.</p>	1050	2040 2060	3020

# Other Resources (continued)

Distributor Code	Other Resources	Levels/Module No.		
		1	2	3
INEE	<i>Sunship Earth: An Acclimatization Program for Outdoor Learning.</i> Steve Van Matre. Calgary, AB: The Institute for Earth Education, 1979. Book.	1030 1050	2020 2030	3020
LLP	<i>Trees and Shrubs of Alberta: A Habitat Field Guide.</i> K. Wilkinson. Lone Pine Publishing, 1990.  Clear, concise, non-technical descriptions of Alberta's native and natural trees and shrubs are combined with 180 full-colour photos and line drawings. Includes habitat keys and distribution maps.	1010 1020 1030	2030	
ENED	<i>Water In Alberta: The Living Flow.</i> Edmonton, AB: Alberta Environmental Protection, Education Branch, 1993. Teacher's Resource Kit.		2040 2090	3040 3090
ENED	<i>Water Quality Questions: The Nature and Importance of Water Quality Variables in Alberta.</i> Edmonton, AB: Alberta Environmental Protection, Education Branch, 1990. Teacher Guide and Student Booklet.	1050	2060 2090	3020 3090
SSC	<i>Wetlands.</i> Ottawa, ON: Canadian Wildlife Service, Environment Canada, 1989. Pamphlet.	1050	2090	3050 3060 3090
SSC	<i>What We Can Do For Our Environment: Hundreds of Things To Do Now.</i> (4th edition.) Hull, PQ: Environment Canada, Minister of Supply and Services, 1991. Booklet.	1050	2090	3020 3090
EPPC	<i>Working With Wildlife – A Volunteer's Directory.</i> Carla Palaschuk. Edmonton, AB: Alberta Environmental Protection. Booklet.			3020

## ADDITIONAL SOURCES

Available to Career and Technology Studies (CTS) teachers, locally and provincially, are many sources of information that can be used to enhance CTS. These sources are available through the community (e.g., libraries, boards, committees, clubs, associations) and through government agencies, resource centres and organizations. Some sources, e.g., government departments, undergo frequent name and/or telephone number changes. Please consult your telephone directory or an appropriate government directory.

The following is a partial list of sources to consider:

### TEACHER-LIBRARIANS

Planned and purposeful use of library resources helps students grow in their ability to gather, process and share information. Research activities require access to an adequate quantity and variety of appropriate, up-to-date print and nonprint resources from the school library, other libraries, the community and additional sources. Some techniques to consider are:

- planning together
- establishing specific objectives
- integrating research skills into planning.

Cooperation between the teacher-librarian and the subject area teacher in the development of effectively planned resource-based research activities ensures that students are taught the research skills as well as the subject content. Also see *Focus on Research: A Guide to Developing Student's Research Skills* referenced in the Alberta Education resources section.

### ALBERTA EDUCATION SOURCES

Alberta Government telephone numbers can be reached toll free from outside Edmonton by dialing 310-0000.

The following monographs are available for purchase from the Learning Resources Distributing Centre. Refer to the Distributor Directory at the end of this section for address, telephone, fax and Internet address.

Please consult the "Support Documents" section or the "Legal, Service and Information Publications" section in the LRDC *Buyers Guide* for ordering information and costs.

### Developmental Framework Documents

- *The Emerging Student: Relationships Among the Cognitive, Social and Physical Domains of Development*, 1991 (Stock No. 161555)

This document examines the child, or student, as a productive learner, integrating all the domains of development: cognitive, social and physical. It emphasizes the need for providing balanced curriculum and instruction.

- *Students' Interactions Developmental Framework: The Social Sphere*, 1988 (Stock No. 161399)

This document examines children's perceptual, structural and motor development and how such physical development affects certain learning processes.

- *Students' Physical Growth: Developmental Framework Physical Dimension*, 1988 (Stock No. 161414)

This document examines children's normal physical growth in three areas: perceptual, structural and motor development. In none of these areas is the child's growth in a single continuous curve throughout the first two decades of life. Physical growth is characterized by periods of rapid growth and periods of slower growth. Consequently, differences and changes in growth patterns may affect the timing of certain learning processes.

#### Other

- *Focus on Research: A Guide to Developing Students' Research Skills*, 1990 (Stock No. 161802)

This document outlines a resource-based research model that helps students manage information effectively and efficiently, and gain skills that are transferable to school and work situations. This model provides a developmental approach to teaching students how to do research.

- *Teaching Thinking: Enhancing Learning*, 1990 (Stock No. 161521)

Principles and guidelines for cultivating thinking, ECS to Grade 12, have been developed in this resource. It offers a definition of thinking, describes nine basic principles on which the suggested practices are based, and discusses possible procedures for implementation in schools and classrooms.

#### ACCESS: The Education Station

ACCESS: The Education Station offers a variety of resources and services to teachers. For a nominal dubbing and tape fee, teachers may have ACCESS: The Education Station audio and video library tapes copied. ACCESS: The Education Station publishes listings of audio and video cassettes as well as a comprehensive programming schedule.

Of particular interest are the CTS videos, which are available with utilization guides. The guides outline key points in each video and suggest questions for discussion, classroom projects and other activities. Video topics are listed in the Support Learning Resources section of this guide. The videos and accompanying support material can be obtained from ACCESS: The Education Station. Refer to the Distributor Directory at the end of this section for address, telephone, fax and Internet address.

#### GOVERNMENT SOURCES

##### National Film Board of Canada (NFB)

The NFB has numerous films and videotapes that may be suitable for Career and Technology Studies strands. For a list of NFB films and videotapes indexed by title, subject and director, or for purchase of NFB films and videotapes, call 1-800-267-7710 (toll free) or Internet address: <http://www.nfb.ca>

ACCESS: The Education Station and some school boards have acquired duplication rights to some NFB videotapes. Please contact ACCESS: The Education Station or consult the relevant catalogues in your school or school district.

The Edmonton Public Library and the Calgary Public Library have a selection of NFB films and videotapes that can be borrowed free of charge with a Public Library borrower's card. For further information, contact:

Edmonton Public Library  
Telephone: 403-496-7000

Calgary Public Library  
Telephone: 403-260-2650

For further information contact:

##### Statistics Canada

Regional Office  
8th Floor, Park Square  
10001 Bellamy Hill  
Edmonton, AB T5J 3B6  
Telephone: 403-495-3027  
Fax: 403-495-5318  
Internet address: <http://www.statcan.ca>

Statistics Canada produces periodicals, reports, and an annual year book.



## **Resource Centres**

### ***Urban Resource Centres***

#### **Instructional Services**

Elk Island Public Schools  
2001 Sherwood Drive  
Sherwood Park, AB T8A 3W7  
Telephone: 403-464-8235  
Fax: 403-464-8033  
Internet Address: <http://ei.educ.ab.ca>

#### **Learning Resources Centre**

Red Deer Public School Board  
4747 – 53 Street  
Red Deer, AB T4N 2E6  
Telephone: 403-343-8896  
Fax: 403-347-8190

#### **Instructional Materials Centre**

Calgary Separate School Board  
6220 Lakeview Drive SW  
Calgary, AB T3E 5T1  
Telephone: 403-298-1679  
Fax: 403-249-3054

#### **School, Student, Parent Services Unit**

Program and Professional Support Services Sub Unit  
Calgary Board of Education  
3610 – 9 Street SE  
Calgary, AB T2G 3C5  
Telephone: 403-294-8542  
Fax: 403-287-9739

After July 1, 1997, please contact the School, Student, Parent Services Unit regarding the relocation of the Loan Pool Resource Unit.

#### **Learning Resources**

Edmonton Public School Board  
Centre for Education  
One Kingsway Avenue  
Edmonton, AB T5H 4G9  
Telephone: 403-429-8387  
Fax: 403-429-0625

#### **Instructional Materials Centre**

Medicine Hat School District No. 76  
601 – 1 Avenue SW  
Medicine Hat, AB T1A 4Y7  
Telephone: 403-528-6719  
Fax: 403-529-5339

#### **Resource Centre**

Edmonton Catholic Schools  
St. Anthony's Teacher Centre  
10425 – 84 Avenue  
Edmonton, AB T6E 2H3  
Telephone: 403-439-7356  
Fax: 403-433-0181

#### **Instructional Media Centre**

Northern Lights School Division No. 69  
Bonnyville Centralized High School  
4908 – 49 Avenue  
Bonnyville, AB T9N 2J7  
Telephone: 403-826-3366  
Fax: 403-826-2959

### ***Regional Resource Centres***

#### **Zone 1**

Zone One Regional Resource Centre  
P.O. Box 6536  
10020 – 101 Street  
Peace River, AB T8S 1S3  
Telephone: 403-624-3187  
Fax: 403-624-5941

#### **Zone 2/3**

Central Alberta Media Services (CAMS)  
182 Sioux Road  
Sherwood Park, AB T8A 3X5  
Telephone: 403-464-5540  
Fax: 403-449-5326

#### **Zone 4**

Information and Development Services  
Parkland Regional Library  
5404 – 56 Avenue  
Lacombe, AB T4L 1G1  
Telephone: 403-782-3850  
Fax: 403-782-4650  
Internet Address: <http://rtt.ab.ca.rtt/prl/prl.htm>

## Zone 5

South Central Alberta Resource Centre (SCARC)  
Golden Hills Regional Division  
435A Hwy 1  
Westmount School  
Strathmore, AB T0J 3H0  
Telephone: 403-934-5028  
Fax: 403-934-5125

## Zone 6

Southern Alberta Learning Resource Centre (SALRC)  
Provincial Government Administration Building  
909 Third Avenue North, Room No. 120  
Box 845  
Lethbridge, AB T1J 3Z8  
Telephone: 403-320-7807  
Fax: 403-320-7817

## OTHER GOVERNMENT SOURCES

### Alberta Advanced Education and Career Development

Information Development and Marketing  
8th Floor, City Centre Building  
10155 - 102 Street  
Edmonton, AB T5J 4L5  
Telephone: 403-422-1794  
Fax: 403-422-5319  
E-mail: careerinfo@aecd.gov.ab.ca

*Alberta Careers Beyond 2000*  
*Alberta Careers Beyond 2000: Industry Sector Profiles*  
*Alberta Careers Beyond 2000: Occupational Profiles.*

Videos on career planning and entrepreneurial topics are available through the library of this department. Call 403-422-4752 for more information. The following videos are representative of the library's holdings:

*The Entrepreneur*  
*Get a Job*  
*A Head for Business*  
*The Seven Phases of a Job Interview.*

## Alberta Environmental Protection

Website: [www.gov.ab.ca/~env/index.html](http://www.gov.ab.ca/~env/index.html)

Strategic and Regional Support  
Education Branch  
(handles inquiries formerly directed to the Environmental Council of Alberta)  
11th Floor, South Petroleum Plaza  
9915 - 108 Street  
Edmonton, AB T5K 2G8  
Telephone: 403-427-6310  
Fax: 403-422-5136  
E-mail: envedu@env.gov.ab.ca

*Land Conservation Education Program*  
*Pesticide Education Program*  
*The Water Literacy Program*  
*Focus On Series*  
*Poster Education Series*

Workshops and presentations on these program materials can be arranged.

Communications Division  
9th Floor, Petroleum Plaza, South Tower  
9915 - 108 Street  
Edmonton, Alberta T5K 2G8  
Telephone: 403-427-8636  
Fax: 403-422-6339

*EP LINK* (a newsletter about projects, programs and activities undertaken by Alberta Environmental Protection staff)

Land and Forest Services  
9920 - 108 Street  
10th Floor, Bramalea Building  
Edmonton, AB T5K 2M4  
Telephone: 403-427-8474  
Fax: 403-427-0292

### *Junior Forest Wardens Program*

Natural Resources Service  
(handles inquiries formerly directed to Fish and Wildlife Services)  
Information Centre  
9920 - 108 Street  
Edmonton, AB T5K 2M4  
Telephone: 403-944-0313

Edmonton District Fish and Wildlife Office  
(handles inquiries regarding all Conservation  
Education Programs)  
14515 – 122 Avenue  
Edmonton, AB T5L 2W4  
Telephone: 403-422-2605  
Fax: 403-427-5695

*Project Wild*  
*Alberta Conservation and Hunter Education*  
*Program*  
*Alberta Fishing Education Program*

Provincial Film Library  
(handles the booking and distribution of  
Conservation Education films and videos)  
2<sup>nd</sup> Floor, 11510 Kingsway Avenue  
Edmonton, AB T5G 2Y5  
Telephone: 403-427-4381  
Fax: 403-452-0668

Recreation and Protected Areas Division  
(handles inquiries formerly directed to Alberta  
Parks)  
2nd Floor Oxbridge Place  
9820-106 Street  
Edmonton, AB T5K 2J6  
Telephone: 403-427-6781  
Fax: 403-427-5980

**Alberta Justice**  
Chief Provincial Firearms Office  
Ground Floor, 10365 – 97 Street  
Edmonton, AB T5J 3W5  
Telephone: 403-427-0437  
Fax: 403-427-1100

*Canadian Firearms Safety Course.*

**Canadian Heritage, Parks Canada**  
(handles inquiries formerly directed to Parks  
Canada)

Website (for Canada's Environmental Report):  
<http://199.212.18.12/folio.cgi/soe>

Telephone: 1-800-748-7275  
E-mail: [natlparks-ab@pch.gc.ca](mailto:natlparks-ab@pch.gc.ca)

*Calgary Office:*  
552, 220 – 4th Avenue SE  
Calgary, AB T2G 4X3

*Edmonton Office:*  
220 Canada Place  
9700 Jasper Avenue  
Edmonton, AB T5J 4C3

## **Environment Canada**

Action 21  
27<sup>th</sup> Floor, #10 Wellington Street  
Hull, PQ K1A 0H3  
Telephone: 1-800-668-6767

*Environmental Citizenship Series:*  
*A Primer on Environmental Citizenship*  
*The Nature of Canada: A Primer on Spaces and*  
*Species*  
*A Primer on Climate Change*  
*A Primer on Water*

Communications Division  
Environmental Conservation Branch  
Western & Northern Region  
(handles inquiries formerly directed to the Canadian  
Wildlife Service)  
200, 4999 – 98 Avenue  
Edmonton, AB T6B 2X3  
Telephone: 403-951-8720  
Fax: 403-495-2615

Inquiry Centre  
351 St. Joseph Blvd.  
Hull, PQ K1A 0H3  
Telephone: 819-997-2800  
Fax: 613-953-2225

## **Natural Resources Canada**

Website: [www.nrcan.gc.ca](http://www.nrcan.gc.ca)

Canadian Forestry Service  
(handles inquiries formerly directed to Forestry  
Canada & Northern Forestry Research Centre)

Websites: [www.nrcan.gc.ca/cfs](http://www.nrcan.gc.ca/cfs)  
[www.nofc.forestry.ca](http://www.nofc.forestry.ca)

5320 – 122 Street  
Edmonton, Alberta T6H 3S5  
Telephone: 403-435-7210  
Fax: 403-435-7359  
E-mail: [@nofc.forestry.ca](mailto:@nofc.forestry.ca)

Distribution Section  
Communications NRCan  
580 Booth Street, 20th Floor  
Ottawa, ON K1A 0E4  
Telephone: 616-992-0759 / 616-995-6783  
Fax: 616-996-9094

(A *Publications List* is available upon request.)

## **PROFESSIONAL ASSOCIATIONS**

### **ATEC**

12th Floor, Sterling Place  
9940 – 106 Street  
Edmonton, AB T5K 2N2  
Telephone: 403-422-0781  
Fax: 403-422-3430  
Internet: <http://www.ATEC.ca>

- Resources previously available through ATEC may now be available from Training Resource Centre, Grant MacEwan Community College. Refer to the Distributor Directory at the end of this section for address, telephone, fax and Internet address.

### *Occupational Standards for:*

*Freshwater Angling Guide*  
*Outdoor Guide*  
*Hunting Guide*

## **Alberta Registered Professional Foresters Association**

Website: [www.nofc.forestry.ca/arpfa](http://www.nofc.forestry.ca/arpfa)  
5320 – 122 Street  
Edmonton, AB T6H 3S5  
Telephone: 403-432-1177  
Fax: 403-432-7046  
E-mail: [arpfa@nofc.forestry.ca](mailto:arpfa@nofc.forestry.ca)

## **Alberta Society of Professional Biologists**

Website: [www.ccinet.ab.ca/aspb](http://www.ccinet.ab.ca/aspb)  
#2 – 9804 – 47th Avenue  
Edmonton, AB T6E 5P3  
Telephone: 403-434-5765  
Fax: 403-435-7503  
E-mail: [aspb@ccinet.ab.ca](mailto:aspb@ccinet.ab.ca)

## **Alberta Teachers' Association**

Website: [www.teachers.ab.ca](http://www.teachers.ab.ca)  
Barnett House  
11010 – 142 Street  
Edmonton, AB T5N 2R1  
Telephone: 1-800-232-7208  
403-453-2411  
Fax: 403-455-6481

### *CTS Council*

*Environmental and Outdoor Education Council*  
*Alberta Global Education Project*  
*Science Council*

## **Alberta Veterinary Medical Association**

100, 8615 – 149 Street  
Edmonton, AB T5R 1B3  
Telephone: 403-489-5007  
Fax: 403-484-8311



## OFF CAMPUS FACILITIES

The following is a partial list of facilities that provide hands-on experience for student in aspects of resource management and environmental education. Contact should be made directly with the facility to obtain details of what is offered to school groups or students.

### **Bennett Environmental Education Centre**

Website:

[www.epsb.edmonton.ab.ca/services/bennettc](http://www.epsb.edmonton.ab.ca/services/bennettc)

Edmonton Public Schools  
9703 – 94 Street  
Edmonton, AB T6C 3W1  
Contact: Sandy Wright  
Telephone: 403-468-1439  
1-800-664-6630  
Fax: 403-466-3370  
E-mail: [bennettc@epsb.edmonton.ab.ca](mailto:bennettc@epsb.edmonton.ab.ca)

### **Environmental Training Centre** *(formerly the Forest Technology School)*

Website: [www.gov.ab.ca/env/cms/hrd/etc/etc.html](http://www.gov.ab.ca/env/cms/hrd/etc/etc.html)

Alberta Forest Service Museum  
1176 Switzer Drive  
Hinton, AB T7V 1V3  
Telephone: 403-865-8200  
Fax: 403-865-8266  
E-mail: [envtrain@env.gov.ab.ca](mailto:envtrain@env.gov.ab.ca)

Cache Percotte Environmental Training Centre  
1176 Switzer Drive  
Hinton, AB T7V 1V3  
Telephone: 403-865-8234 (information)  
Telephone: 403-865-8200 (bookings)

Provides programs that develop awareness, appreciation, respect and responsible use of the natural environment as well as outdoor recreation skills. Through partnerships with the Alberta Forest Products Association, the centre also provides programs on responsible forest management practices in Alberta.

### **Calgary Zoo**

Website: [www.calagaryzoo.ab.ca](http://www.calagaryzoo.ab.ca)

Botanical Gardens and Prehistoric Park  
P.O. Box 3036, Station "B"  
Calgary, AB T2M 4R8  
Telephone: 403-232-9386 (program bookings)  
E-mail: through website

### **Devonian Botanic Garden**

Website:

[www.discoveredmonton.com/devonian](http://www.discoveredmonton.com/devonian)

University of Alberta  
Edmonton, AB T6G 2E1  
Telephone: 403-987-3054  
Fax: 403-987-4141

### **Environmental Resource Centre**

Website: [www.dc.ab.ca](http://www.dc.ab.ca)

10511 Saskatchewan Drive  
Edmonton, AB T6E 4S1  
Telephone: 403-433-8711  
Fax: 403-439-5081  
E-mail: [dc@ccinet.ab.ca](mailto:dc@ccinet.ab.ca)

### **Glenbow Museum**

Website: [lexicom.ab.ca/~glenbow](http://lexicom.ab.ca/~glenbow)

130 – 9 Avenue SE  
Calgary, AB T2G 0P3  
Telephone: 403-264-8300  
Fax: 403-265-9769  
E-mail: [glenbow@lexicom.ab.ca](mailto:glenbow@lexicom.ab.ca)

### **Head-Smashed-In Buffalo Jump**

Box 1977  
Fort Macleod, AB T0L 0Z0  
Telephone: 403-553-2731 (Interpretive Centre)  
403-265-0048 (Calgary direct)  
Fax: 403-553-3141  
E-mail: [ken.carson@hs\\_smg\\_edm@culture](mailto:ken.carson@hs_smg_edm@culture)

### **John Janzen Nature Centre**

P.O. Box 2359  
Edmonton, AB T5J 2R7  
Telephone: 403-496-2925  
Fax: 403-496-4701

**Kananaskis Field Station**

Website: [www.ucalgary.ca/~biology/kananaskis](http://www.ucalgary.ca/~biology/kananaskis)

Coordinator of School Programs

Bio Sciences 186

University of Calgary

2500 University Drive NW

Calgary, AB T2N 1N4

Telephone: 403-220-5355

Fax: 403-673-3671

E-mail: [mmappin@acs.ucalgary.ca](mailto:mmappin@acs.ucalgary.ca)

**Provincial Museum of Alberta**

Website: [www.pma.edmonton.ab.ca](http://www.pma.edmonton.ab.ca)

12845 – 102 Avenue

Edmonton, Alberta T5N 0M6

Telephone: 403-453-9131

Fax: 403-422-5681

**Royal Tyrell Museum of Palaeontology**

Website: <http://tyrrell.magtech.ab.ca>

Box 7500

Drumheller, AB T0J 0Y0

Telephone: 403-823-7707

Fax: 403-823-7131

E-mail: [rtmp@dns.magtech.ab.ca](mailto:rtmp@dns.magtech.ab.ca)

**CONSERVATION EDUCATION CAMPS****Alford Lake Conservation Education Centre**

Box 369

Caroline, AB T0M 0M0

Telephone: 403-722-2423

Fax: 403-722-2423

**Crowsnest Portable Camp**

1440 – 17A Street SE

Calgary, AB T2G 4T9

Telephone: 403-297-2838

Fax: 403-297-2839

**Narrow Lake Conservation Education Centre**

14515 – 122 Avenue

Edmonton, Alberta T5L 2W4

Telephone: 403-422-2606

Fax: 403-427-5695

**FISH HATCHERIES / BROOD STATIONS****Cold Lake Fish Hatchery**

Box 8159

Cold Lake, AB T0A 0V0

Telephone: 403-639-4087

Fax: 403-639-3598

**Raven Brood Trout Station**

Box 160

Caroline, AB T0M 0M0

Telephone: 403-722-2180

Fax: 403-722-3784

**Sam Livingston Fish Hatcheries**

1440 – 17A Street SE

Calgary, AB T2G 4T9

Telephone: 403-297-6561

**OTHER AGENCIES****Alberta Forestry Association**

101, 10526 Jasper Avenue

Edmonton, AB T5J 1Z7

Telephone: 403-428-7582

Fax: 403-428-7557

*Forest Resources Directory*

*Alberta's Focus on Forests*

**Alberta Safety Council**

201, 10526 Jasper Avenue  
Edmonton, AB T5J 1Z7  
Telephone: 403-428-7555  
1-800-301-6407  
Fax: 403-428-7557

Provides a range of occupational health and safety training programs endorsed by industry partners.

**Alberta Science and Technology Hotline**

Website: [www.cadvision.com/calg\\_sci\\_net](http://www.cadvision.com/calg_sci_net)  
Peace River Hotline, Northwest Alberta  
Telephone: 403-539-9847  
Fax: 403-539-0522

Northeast Alberta, including Edmonton and Red Deer Regions:

Telephone: 403-448-0055  
Fax: 403-453-2711

**Calgary Region**

Telephone: 403-263-6226  
Fax: 403-230-8488  
E-mail: [scihot@cadvision.com](mailto:scihot@cadvision.com)

**Praxis Hotline, Medicine Hat Region**

Telephone: 403-526-4237

The *Alberta Science and Technology Hotline* provides teachers with a direct line to the science community to access information and expertise.

**Alberta Wilderness Association**

PO Box 6398, Stn. D  
Calgary, AB T2P 2E1  
Telephone: 403-283-2025  
Fax: 403-270-2743  
E-mail: [awa@web.net](mailto:awa@web.net)

**Canadian Forestry Association**

185 Somerset Street West, Suite 203  
Ottawa, ON K2P 0J2  
Telephone: 613-232-1815  
Fax: 613-232-4210

*National Forest Education Resources Catalogue*

**Canadian Nature Federation**

Website: [www.web.net/~cnf](http://www.web.net/~cnf)  
1 Nicholas Street, Suite 520  
Ottawa, ON K1N 7B7  
Telephone: 613-562-3447  
Fax: 613-562-3371  
E-mail: [cnf@web.net](mailto:cnf@web.net)

**Canadian Parks and Wilderness Society**

Website: [www.afternet.com/~tnr/cpaws/cpaws.html](http://www.afternet.com/~tnr/cpaws/cpaws.html)  
401 Richmond St W  
Toronto, ON M5V 3A8  
Telephone: 416-972-2720  
Fax: 416-979-3155  
E-mail: [cpaws@web.net](mailto:cpaws@web.net)

**Canadian Wildlife Federation**

Website: [www.toucan.net/cwf-fcf/cwfhome.html](http://www.toucan.net/cwf-fcf/cwfhome.html)  
2740 Queensview Dr  
Ottawa, ON K2B 1A2  
Telephone: 613-721-2286  
1-800-563-9453  
Fax: 613-721-2902  
E-mail: [info@cwf-fcf.org](mailto:info@cwf-fcf.org)

**Ducks Unlimited Canada**

Website: [www.ducks.ca](http://www.ducks.ca)  
PO Box 1160  
Oak Hammock Marsh  
Stonewall, MB R0C 2Z0  
Telephone: 204-467-3000  
1-800-665-3825  
Fax: 204-467-9025  
E-mail: through website

**Alberta Office:**

202 – 10470 – 176 Street  
Edmonton, AB T5S 1L3  
Telephone: 403-489-2002  
Fax: 403-489-1856

In addition to providing a range of relevant print material, Ducks Unlimited offers the public an extensive video/film library.

**FEESA**

Website: [www.telusplanet.net/public/feesa](http://www.telusplanet.net/public/feesa)

900, 10150 – 100 Street

Edmonton, AB T5J 0P6

Telephone: 403-421-1497

Fax: 403-425-4506

E-mail: [feesa@telusplanet.net](mailto:feesa@telusplanet.net)

FEESA offers education training and resource materials focusing on a variety of environmental and educational needs. Programs are developed in partnership with business, industry, government, environmental and education groups.

**Green Teacher**

Website: [www.web.ca/~greentea/](http://www.web.ca/~greentea/)

95 Robert Street

Toronto, ON M5S 2K5

Telephone: 416-960-1244

Fax: 416-925-3474

E-mail: [greentea@web.net](mailto:greentea@web.net)

A magazine by and for educators to enhance environmental and global education across the curriculum.

**The Pembina Institute for Appropriate Development**

Website: [www.dvnet.drayton-valley.ab.ca/](http://www.dvnet.drayton-valley.ab.ca/environ.pembina.htm)  
[environ.pembina.htm](http://environ.pembina.htm)

P.O. Box 7558

Drayton Valley, AB T7A 1S7

Telephone: 403-542-6272

Fax: 403-542-6464

E-mail: [piad@ccinet.ab.ca](mailto:piad@ccinet.ab.ca)

***The Canadian Environmental Education Catalogue*****Recycle Infoline**

*(handles inquiries previously directed to the Alberta Special Waste Management Corporation)*

12<sup>th</sup> floor South Petroleum Plaza

9915 – 108 Street

Edmonton, AB T5K 2G8

Telephone: 1-800-463-6326

Fax: 403-427-0413

Provides information regarding environmental and hazardous wastes.

**Red Cross Society**

Website: [www.redcross.ca](http://www.redcross.ca)

737 – 13 Avenue SW

Calgary, AB T2R 1J1

Telephone: 403-541-4445

Fax: 403-541-4428

*Emergency First Aid*

*Standard First Aid*

*Basic Rescuer CPR*

**The Science Alberta Foundation**

Website: under construction

2100, 700 – 6<sup>th</sup> Avenue SW

Calgary, AB T2P 0T8

Telephone: 403-260-1996

Fax: 403-260-1165

E-mail: [litebulb@supernet.ab.ca](mailto:litebulb@supernet.ab.ca)

*The Science Alberta Foundation* promotes science literacy throughout the province. Their programs are hands-on, and include travelling exhibitions and professional development courses.

**The SEEDS Foundation**

440, 10169 – 104 Street

Edmonton, AB T5J 1A5

Telephone: 403-424-0971

Fax: 403-424-2444

**St. John Ambulance**

Provincial Headquarters

10975 – 124 Street

Edmonton, AB T5M 0H9

Telephone: 403-452-6565

Fax: 403-452-2835

*Emergency First Aid*

*Standard First Aid*

*Basic Rescuer CPR*

*First Aid in the Wilderness*



**W.I.S.E. Foundation**

1440 – 17A Street SE

Calgary, AB T2G 4T9

Telephone: 403-297-2838

**World Wildlife Fund Canada**

Website: [www.wwfcanada.org](http://www.wwfcanada.org)

#504, 90 Eglinton Avenue E

Toronto, ON M4P 2Z7

Telephone: 416-489-8800

1-800-267-2632

Fax: 416-489-3611 (or 8055)

E-mail: [panda@wwfcanada.org](mailto:panda@wwfcanada.org)

**ADDITIONAL WEBSITES OF NOTE****AgrEvo Canada**

<http://www.hcc.com/agrevo>

**Canadian Biodiversity Information Network**

<http://www.doe.ca/ecs/biodiv/biociv.html>

**EcoNet**

<http://www.igc.apc.org/forest>

**State of Canada's Forests**

<http://ncr157.ncr.forestry.ca/sof/sof.html>

**Western Canada Wilderness Committee**

<http://www.ccinet.ab.ca/wcwc/>

## DISTRIBUTOR DIRECTORY

The entries in the Distributor Directory are arranged alphabetically by code.

CODE	Distributor/Address	Contact Via
ACC	ACCESS: The Education Station 3270 – 76 Avenue Edmonton, AB T6B 2N9	403-440-7777 Fax: 403-440-8899 1-800-352-8293 <a href="http://www.ccinet.ab.ca/access">http://www.ccinet.ab.ca/access</a>
ACP	Amoco Canada Petroleum Company Ltd. 240 – 4 <sup>th</sup> Avenue SW Calgary, AB T2P 2H8	403-233-1425 Fax: 403-233-1476
DUCK	Ducks Unlimited Canada P.O. Box 1160 Oak Hammock Marsh Stonewall, MB R0C 2Z0	1-800-665-3825 Fax: 204-467-9025
ENCA	Environment Canada Terrasses de la Chaudiere 27 <sup>th</sup> Floor, 10 Wellington Street Hull, Quebec K1A 0H3	819-953-1595 Fax: 819-994-1412 1-800-668-6767
FEESA	FEESA, An Environmental Education Society #900, 10150 – 100 Street Edmonton, AB T5J 0P6	403-421-1497 Fax: 403-425-4506
KFL	Karvonen Films Ltd. 2001 – 91 Avenue Edmonton, AB T6P 1L1	403-467-7167 Fax: 403-467-7162
LRDC	Learning Resources Distributing Centre 12360 – 142 Street Edmonton, AB T5L 4X9	403-427-5775 Fax: 403-422-9750 <a href="http://ednet.edc.gov.ab.ca/lrdc">http://ednet.edc.gov.ab.ca/lrdc</a>
MLP	Missing Link Productions Ltd. 400, 119 – 14 <sup>th</sup> Street NW Calgary, AB T2N 1Z6	403-283-6201 Fax: 403-283-6214
TRC	Training Resource Centre Grant MacEwan Community College City Centre Campus Room 5-309, 10700 – 104 Avenue Edmonton, AB T5J 4S2	403-497-5475 Fax: 403-497-5677

# WILDLIFE

## SECTION J: SAMPLE STUDENT LEARNING GUIDES

The following pages provide background information, strategies and a template for developing student learning guides. Also included at the end of this section are several sample student learning guides for Wildlife.

A student learning guide provides information and direction to help students attain the expectations defined in a specified CTS module. It is designed to be used by students under the direction of a teacher.

Many excellent student learning guides (SLGs) are available for use and/or are in the process of being developed. While Alberta Education provides a development template accompanied by some samples, most student learning guide development is being done by individuals and organizations across the province (e.g., school jurisdictions, specialist councils, post-secondary organizations). Refer to the *Career & Technology Studies Manual for Administrators, Counsellors and Teachers* (Appendix 11) for further information regarding student learning guide developers and sources.

**Note:** A student learning guide is not a self-contained learning package (e.g., Distance Learning Module), such as you might receive from the Alberta Distance Learning Centre (ADLC) or Distance Learning Options South (DLOS).

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SAMPLE STUDENT LEARNING GUIDES	
WLD1020 Natural History of Wildlife .....	J.11
WLD2040 Wildlife Spaces & Species .....	J.17
WLD3050 Wildlife Management 1 .....	J.25

## BACKGROUND INFORMATION

A Student Learning Guide (SLG) is a presentation of information and direction that will help students attain the expectations defined in a specified CTS module. It is designed to be used by students under the direction of a teacher. A SLG is not a self-contained learning package such as you might receive from the Alberta Distance Learning Centre (ADLC) or Distance Learning Options South (DLOS).

Each SLG is based on curriculum and assessment standards as defined for a particular CTS module. Curriculum and assessment standards are defined in this document through:

- module and specific learner expectations (Sections D, E and F)
- assessment criteria and conditions (Sections D, E and F)
- assessment tools (Section G).

The SLG is written with the student in mind and makes sense to the student in the context of his or her CTS program. SLGs are designed to guide students through modules under the direction of the teacher. They can be used to guide:

- an entire class
- a small groups of students
- individual students.

In some instances, the Student Learning Guide may also be used as teacher lesson plans. When using SLGs as teacher lesson plans, it should be noted that they tend to be:

- learner-centred (versus teacher-directed)
- activity-based (versus lecture-based)
- resource-based (versus textbook-based).

### Components of a Student Learning Guide

The student learning guide format, as developed by Alberta Education, typically has *seven* components as described below.

#### 1. *Why Take This Module?*

This section provides a brief rationale for the work the student will do, and also establishes a context for learning (i.e., in relation to the strand, a life pursuit, a specific industry, etc.).

#### 2. *What Do You Need To Know Before You Start?*

In this section, prerequisite knowledge, skills and attitudes considered necessary for success in the module are identified. Prerequisites may include other modules from within the strand or from related CTS strands, as well as generic knowledge and skills (e.g., safety competencies, the ability to measure/write/draw, prior knowledge of basic information relevant to the area of study).

#### 3. *What Will You Know And Be Able To Do When You Finish?*

This information must parallel and reflect the curriculum and assessment standards as defined for the module. You may find it desirable to rewrite these standards in less formal language for student use.

#### 4. *When Should Your Work Be Done?*

This section provides a timeline that will guide the student in planning their work. The timeline will need to reflect your program and be specific to the assignments you give your students. You may wish to include a time management chart, a list of all assignments to be completed, and instructions to the student regarding the use of a daily planner (i.e., agenda book) to organize their work.

#### 5. *How Will Your Mark For This Module Be Determined?*

This section will interpret the assessment criteria and conditions, assessment standards, assessment tools and suggested emphasis as defined for the module within the context of the projects/tasks completed. Accepted grading practices will then be used to determine a percentage grade for the module—a mark not less than 50% for successful completion. (**Note:** A module is



“successfully completed” when the student can demonstrate ALL of the exit-level competencies or MLEs defined for the module.)

#### 6. *Which Resources May You Use?*

Resources considered appropriate for completing the module and learning activities are identified in this section of the guide. The resources may be available through the Learning Resources Distributing Centre (LRDC) and/or through other agencies. Some SLGs may reference a single resource, while others may reference a range of resources. Resources may include those identified in the Learning Resource Guide (Section I) as well as other sources of information considered appropriate.

#### 7. *Activities/Worksheets*

This section provides student-centred and activity-based projects and assignments that support the module learner expectations. When appropriately aligned with curriculum and assessment standards, successful completion of the projects and assignments will also indicate successful completion of the module.

### **Strategies for Developing Student Learning Guides**

Prior to commencing the development of a student learning guide, teachers are advised to obtain:

- the relevant Guide to Standards and Implementation
- the student learning guide template.

Information communicated to the student in the SLG must parallel and reflect the curriculum and assessment standards as defined for the module. Therefore, critical elements of the Guide to Standards and Implementation that need to be addressed throughout the SLG include:

- module and specific learner expectations
- assessment criteria and conditions
- assessment standards
- assessment tools.

Additional ideas and activities will need to be incorporated into the student learning guide. These can be obtained by:

- reflecting on projects and assignments you have used in delivering programs in the past
- identifying human and physical resources available within the school and community
- networking and exchanging ideas (including SLGs) with other teachers
- reviewing the range of resources (e.g., print, media, software) identified in the Learning Resource Guide (Section I) for a particular module/strand.

Copyright law must also be adhered to when preparing a SLG. Further information and guidelines regarding copyright law can be obtained by referring to the:

- *Copyright Act*
- *Copyright and the Can Copy Agreement.*

A final task in developing a student learning guide involves validating the level of difficulty/challenge/rigour established, and making adjustments as considered appropriate.

A template for developing student learning guides, also available on the Internet, is provided in this section (see “Student Learning Guide Template,” pages J.5–10). Several sample student learning guides are also provided in this section (see “Sample Student Learning Guides,” starting on page J.11).

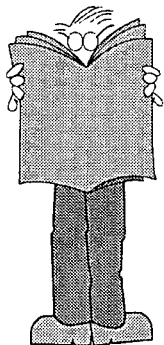
# CAREER & TECHNOLOGY STUDIES



## SAMPLE STUDENT LEARNING GUIDE TEMPLATE

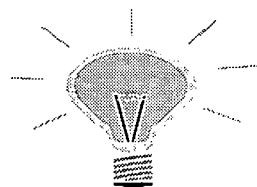
# WHY

**TAKE THIS MODULE?**

A large, empty rectangular box with a thin black border, intended for a student to write their reasons for taking the module.

# WHAT

**DO YOU NEED TO KNOW  
BEFORE YOU START?**

A large, empty rectangular box with a thin black border, intended for a student to write what they need to know before starting the module.

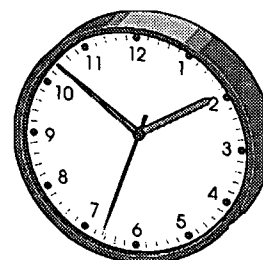
# WHAT

**WILL YOU KNOW AND  
BE ABLE TO DO  
WHEN YOU FINISH?**

- 
- 
- 
- 
- 
- 
- 
- 

# WHEN

**SHOULD YOUR WORK BE DONE?**

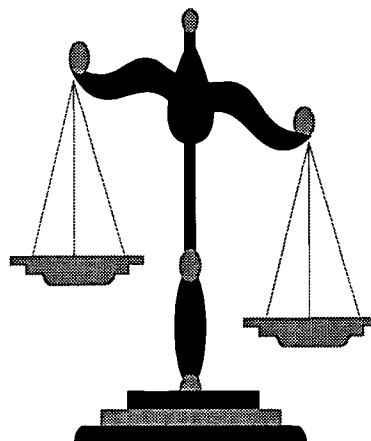




# HOW

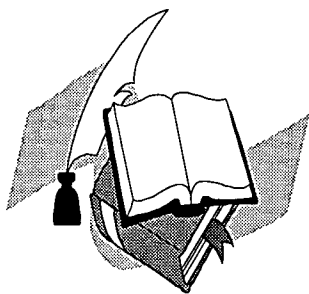
**WILL YOUR MARK FOR THIS  
MODULE BE DETERMINED?**

	PERCENTAGE



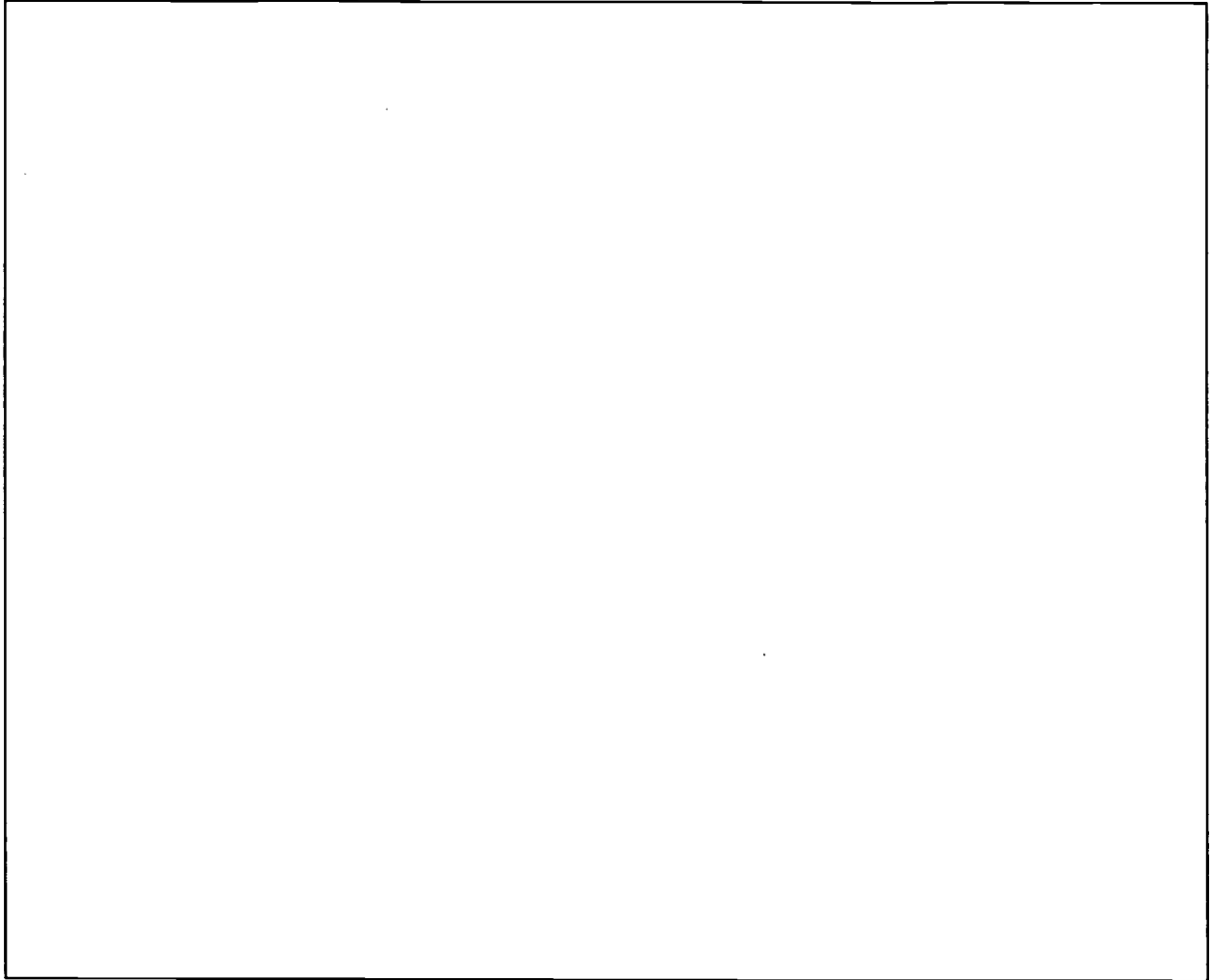
# WHICH

**RESOURCES MAY YOU USE?**



- 
- 
- 
- 
- 
-

# ACTIVITIES/WORKSHEETS



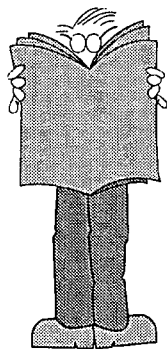
# CAREER & TECHNOLOGY STUDIES

## WILDLIFE

### SAMPLE STUDENT LEARNING GUIDE

#### **WLD1020 Natural History of Wildlife**

## WHY TAKE THIS MODULE?



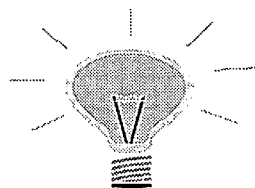
- Alberta contains many diverse and interesting wildlife species. Learn about the biodiversity of wildlife species found in Alberta and Canada, and the varied structures, behaviours and habitats that make them so interesting.
- You will also compare Alberta's wildlife diversity with that in another part of the world.

## WHAT DO YOU NEED TO KNOW BEFORE YOU START?

There are no prerequisites identified for this module.

However, you will need to be able to:

- explain terms used in the study of wildlife
- identify the characteristics of major taxonomic groups of wildlife.





# WHAT

**WILL YOU KNOW AND  
BE ABLE TO DO  
WHEN YOU FINISH?**

Upon completion of this module you will be able to:

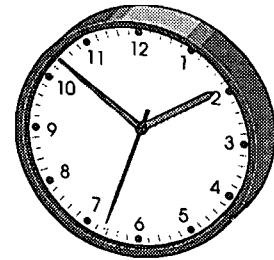
- describe the diversity of Canadian wildlife
- explain the structure, behaviour and habitat of an Alberta wildlife species
- compare and contrast Alberta's wildlife with wildlife in other parts of the world
- demonstrate basic competencies.

# WHEN

**SHOULD YOUR WORK BE DONE?**

Your teacher will give you a timeline for completing tasks and assignments within this module.

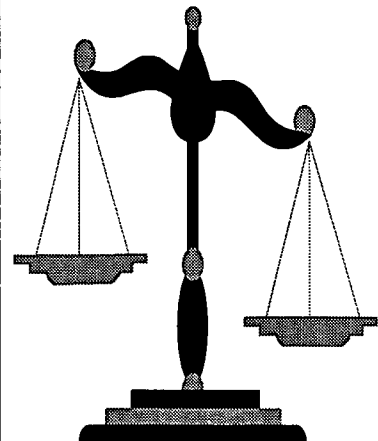
You may also wish to use a time-management planning chart to preplan the work that needs to be done in this module. Plan how you will use your class time as well as extra time needed to complete the assignments in this module.



# HOW

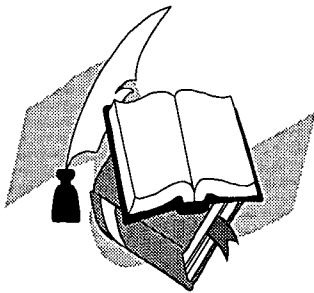
## WILL YOUR MARK FOR THIS MODULE BE DETERMINED?

	PERCENTAGE
<p>You must first demonstrate <b>all</b> of the competencies required for this module.</p> <p>When you have done this, your percentage mark for the module will be determined as follows:</p> <ul style="list-style-type: none"> <li>• Assignment 1</li> <li>• Assignment 2</li> <li>• Assignment 3</li> </ul>	<p>20%</p> <p>50%</p> <p>30%</p>



# WHICH

## RESOURCES MAY YOU USE?



- Status of Fish and Wildlife
- Alberta Conservation and Hunter Education
- Alberta Fishing Education Program
- *Investigating Terrestrial Ecosystems*
- *Proceedings of the Second Endangered Species and Prairie Conservation Workshop*
- *Green Inheritance: The World Wildlife Fund Book of Plants*
- *Singing in the Rainforest* (Missing Link Productions, video)
- "Muted Spring" (*The Globe and Mail*, article)
- *The Fishes of Alberta*, The University of Calgary and the University of Alberta Press
- *Fishes of Alberta*, Government of Alberta
- *Birds of North America: A Guide to Field Identification*
- *A Guide to Amphibians and Reptiles of Alberta*, The University of Calgary and the University of Alberta Press
- *Freshwater Fishes of Canada*, Fisheries Research Board of Canada
- *Wildflowers of the Canadian Rockies*
- *The Atlas of Breeding Birds*
- *Mammals of Alberta* (The Department of Industry and Development)
- *Hoofed Animals of Alberta*
- *The Book of Canadian Fishes*
- "Don't let the voice of spring be silenced" (World Wildlife Fund of Canada, brochure)

# ACTIVITIES/WORKSHEETS

Assignment 1: Compile a list of wildlife species found in Alberta. Include the biological and common names and include at least three species from each of the following categories

plants	grasses, ferns, mosses, conifers, flowering
mammals	bats, rodents, ungulates, carnivores
birds	prey, perching, waterfowl, shorebirds, upland game, arctic migrants, grassland
amphibians	no specific category
reptiles	no specific category
fish	native, introduced
insects	no specific category

Assignment 2: Research project on selected wildlife species found in Alberta or Canada. Your written research report will be based on the following criteria

- Description
- Distribution - include a map
- Habitat
- Feeding habits
- Reproduction
- Social organization
- Interactions with other wildlife species
- Interesting adaptations and behaviours
- Why you have interest in this particular species
- Status/Man's impact on the wildlife species
- Current research endeavours
- A bibliography of reference used.

Use all possible types of resources: books, encyclopedias, magazines, resource people, public libraries, government brochures, etc.

Assignment 3: Comparing Diversity

1. a) Graph the following data: the number of species of breeding birds at different latitudes.  
b) Suggest a least three reasons why there is a change in the number of species at different latitudes. Explain your reasons.
2. Read *Investigating Terrestrial Ecosystems*, Chapter 13, pages 268–288. Compare the temperate rainforest biome in British Columbia with the boreal forest biome found in Yellowknife, NWT (and Alberta) and the tropical rainforest biome found in low altitude regions by answering the questions on pages 276, 277, 279 and 285. **Note:** Other comparisons could be done if resources could be found, e.g. compare a plains-type ecosystem like southern Alberta grasslands with the African Plains, or compare the boreal forest in Asia with the boreal forest in Canada.

## WILDLIFE

### WLD1020 Natural History of Wildlife

3. Watch *Singing in the Rainforest*. Explain in at least one page of writing the message the film is trying convey.
4. Read the article "Muted Spring" and the brochure about songbirds by WWF. Create a poster about an Alberta or Canadian songbird that explains the problems the birds are facing and what can be done.



# CAREER & TECHNOLOGY STUDIES

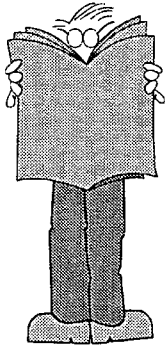
## WILDLIFE

### SAMPLE STUDENT LEARNING GUIDE

#### **WLD2040 Wildlife Spaces & Species**

**Wildlife Spaces and Species (WLD204)**

# WHY

**TAKE THIS MODULE?**

- You will examine representative wildlife spaces and species of Alberta, and investigate global factors which cause the depletion of wildlife species, populations and habitats.
- You will also conduct research on an endangered species or space, and learn about an important local and national strategy to conserve wildlife and its habitat; e.g., the Endangered Spaces Campaign.

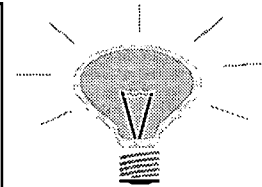
# WHAT

**DO YOU NEED TO KNOW  
BEFORE YOU START?**

There are no prerequisites identified for this module.

However, you should be able to:

- describe the geographical regions of Canada
- gather topical information using the library, computer, interview and other media sources
- identify and describe major stages and steps in the research process.



# WHAT

**WILL YOU KNOW AND  
BE ABLE TO DO  
WHEN YOU FINISH?**

Upon completion of this module you will be able to:

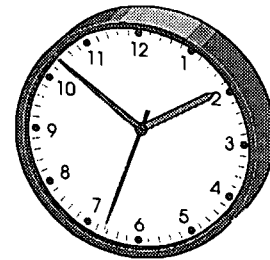
- identify and compare representative ecoregions in Alberta and Canada with similar ecoregions in other parts of the world
- identify and describe threatened or endangered wildlife spaces and species in Alberta and Canada
- describe and compare local and global strategies for wildlife protection and habitat management
- demonstrate basic competencies.

# WHEN

**SHOULD YOUR WORK BE DONE?**

Your teacher will give you a timeline for completing tasks and assignments within this module.

You may also wish to use a time-management planning chart to preplan the work that needs to be done in this module. Plan how you will use your class time as well as extra time needed to complete the assignments in this module.

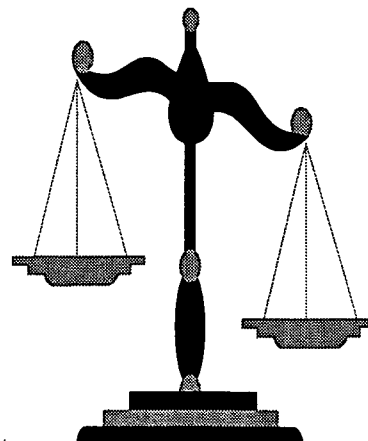


## WLD2040 Wildlife Spaces &amp; Species

# HOW

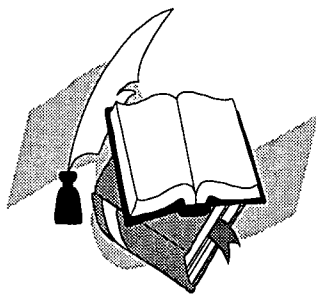
## WILL YOUR MARK FOR THIS MODULE BE DETERMINED?

	PERCENTAGE
<p>You must first demonstrate <b>all</b> of the competencies required for this module.</p> <p>When you have done this, your percentage mark for the module will be determined as follows:</p> <ul style="list-style-type: none"> <li>• Assignment #1</li> <li>• Assignment #2</li> <li>• Assignment #3</li> <li>• Assignment #4</li> </ul>	<p>20%</p> <p>30%</p> <p>20%</p> <p>30%</p>



# WHICH

## RESOURCES MAY YOU USE?



- *Borealis*. 1993. Vol. 4, No. 1, Issue 13, or Alberta's Endangered Spaces (a supplement publication to *Borealis*. 1993. Vol. 3, No. 4, Issue 12)
- *Extinction*: The causes and consequences of the disappearance of a species
- *Endangered Spaces*: The future for Canada's wilderness
- *Borealis*. Canadian Parks and Wilderness Society
- *The Status of Alberta Wildlife*, Alberta Energy/Forestry, Lands and Wildlife
- *Endangered Species*. Environment Canada
- *Working for Wildlife*. World Wildlife Fund of Canada
- *Canadian Endangered Species List*. World Wildlife Fund of Canada



# ACTIVITIES/WORKSHEETS

## Assignment #1: Alberta Spaces and Species

Choose **one** natural region of Alberta that you are not really familiar with. Using the map provided (refer to Appendix), draw a map of Alberta and colour your natural region (and subregions).

Read the section on your chosen natural region. Summarize the status of your chosen natural area in Alberta by answering the following questions:

1. What is the area of your chosen natural region in Alberta? What percentage of Alberta is this?
2. How much of the area remains in a natural state?
3. Define endangered and vulnerable according to the Committee on the Status of Wildlife in Canada (COSEWIC). Put these definitions into your own words.
4. List the endangered and/or vulnerable wildlife species in your chosen natural area.
5. What are the current threats to your natural region? Explain.
6. Read the article "Posterity will Bless Us," pages 15–16. Compose one page of writing summarizing the message the author is trying to convey and your reaction to it.

## Assignment #2: How are Spaces and Species Endangered?

You are required to read Chapter 6 (Direct Endangering) and Chapter 7 (Indirect Endangering) and complete the following assignment.

### Part A: Chapter 6 Direct Endangering

Read pages 123–154 in *Extinction*. Answer all the following questions.

1. How does the author define overexploitation and what does he use as an example?
2. How does "The Tragedy of the Commons" analogy relate to whaling?
3. List other examples of overexploitation or a marine resource.
4. What is most serious environmental challenge to overexploited marine species? Explain in your own words.
5. Some 12,000 years ago, large mammal species in North America went extinct in a short time. Provide three examples of the type of species that went extinct and explain possible reasons for the extinctions.
6. What are moas and rheas?
7. Where is Mauritius Island and what caused the extinction of the Dodo bird?
8. What are the two major reasons for the extinction of the Woolly Mammoths?
9. What are the Inukshucks?
10. Where did the Passenger Pigeon live and what caused its extinction?
11. Why are great apes in such demand for medical research?
12. Provide a least five examples of illegal trade in wildlife
13. Explain at least three reasons why the Cheetah has an uncertain future?
14. Give three examples of human predation for nonedible products.
15. What is a predator control program? Provide three examples of direct endangering by predator control programs.

**WLD2040 Wildlife Spaces & Species****Part B: Chapter 7    Indirect Endangering**

Read pages 155–212 in *Extinction* and answer the following questions:

1. What caused the destruction of corals in Kaneohe Bay, Hawaii and why were the corals not able to survive?
2. How did the introduction of the mosquito decimate native bird populations in Hawaii?
3. What is a serpentine patch?
4. Why are the butterflies Atala Hairstreak in Florida and Karner Blue in New York on the verge of extinction?
5. Describe the complex interactions required for the Large Blue Butterfly which led to its extinction in England.
6. Because of the foundation position of plants in any food chain, it has been estimated that for every one plant species that goes extinct, how many other organisms that depend on the plant species also go extinct?
7. The development and spread of agriculture has always been, and continues to be, a much more serious source of habitat destruction than urbanization. Entire natural ecosystems are converted into stands of one or a few plants and efforts are made to exclude herbivores. Diversity of populations and species is automatically lost, and the plants are usually the first to go. "...Agriculture is a root cause of the extinction of enormous numbers of plant populations and species..." Summarize three examples of how agriculture causes habitat destruction.
8. What is the naive viewpoint about overpopulation often adopted by politicians and developers? What is a more realistic viewpoint?
9. Describe two impacts of water diversion on wildlife near Los Angeles.
10. "It is estimated that the eagle population in the contiguous forty-eight states is less than 1 percent of the population that once lived there." Explain the reasons for this.
11. List all five pollutants humans put into freshwater systems all over the world.
12. List three ways that mining and development of minerals and energy can have negative effects on habitats and species.
13. List two species in North America that have become endangered by dams.
14. What is the human activity that threatens species worldwide?
15. Why is the species diversity of deciduous forests much greater than coniferous forests?
16. Reforestation of temperate zone forests focuses on conserving area rather than quality. Explain how this has implications for species diversity.
17. What makes tropical rainforests more vulnerable to irreversible damage than temperate forests?
18. What are four major assaults on the tropical rainforests?
19. List five species that are threatened by introduced species.
20. What is one reason introduced species are so successful?
21. List at least three ways that recreation can threaten species.

**Assignment #3: Research Project on an Endangered Space or Species**

You must design and conduct a research project on an endangered space or species. Instead of the teacher defining the criteria (what must be included in your research project) for you, you will develop your own. The organization and criteria of your research project must be organized into an outline and handed into your teacher for comments and feedback before you begin your project. Be sure to include resources that you plan to use.

**WLD2040 Wildlife Spaces & Species****Assignment #4: The Endangered Spaces Campaign**

**Part A: Class presentation on The Endangered Spaces Campaign.** Your presentation must include the following:

- a visual overview of Alberta's natural areas
- What is the Endangered Spaces Campaign?
- How is Alberta doing?
- What areas in Alberta need protection and why
- What areas in Alberta have adequate protection?
- What is Special Places 2000?
- Existing protected areas of Alberta and proposed areas for protection
- a letter written to the premier of Alberta expressing your concerns about an endangered space(s)/specie(s) in Alberta.

**Part B: The Canadian Wilderness Charter.** Read and sign the charter. Encourage others to sign the charter. Mail your list of signatures to

The Endangered Spaces Campaign  
World Wildlife Fund  
Suite 504  
90 Eglinton Avenue East  
Toronto, Ontario  
M4P 2Z7

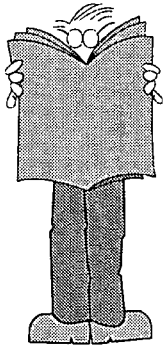
# CAREER & TECHNOLOGY STUDIES

## WILDLIFE

### SAMPLE STUDENT LEARNING GUIDE

#### **WLD3050 Wildlife Management 1**

# WHY TAKE THIS MODULE?



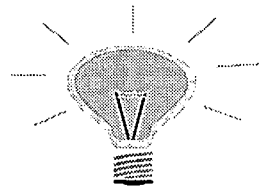
- This module will introduce you to wildlife management and help you understanding its importance. Our spaces and species are threatened by a growing human population and demand for raw materials. With cooperation and wise management, we can protect our wildlife resource.
- Some situations are not easy to resolve to everyone's satisfaction. A complicated situation can be simplified by breaking it down into smaller parts and weighing the pros and cons of each consideration. By developing goals and objectives, a plan can eventually be developed.

# WHAT DO YOU NEED TO KNOW BEFORE YOU START?

**Prerequisite:** WLD3040: Wildlife Research

In addition, to be successful in this module you should be able to:

- gather topical information via library, computer, interview and other media sources
- identify and describe major stages and steps in the research process
- collect baseline and specific data using a variety of information gathering techniques
- analyze, interpret and draw conclusions needed to solve a problem or answer a question.





# WHAT

**WILL YOU KNOW AND  
BE ABLE TO DO  
WHEN YOU FINISH?**

Upon completion of this module you will be able to:

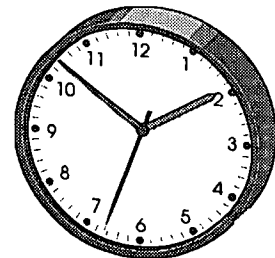
- describe the functions of wildlife management
- identify and explain major components of a wildlife management plan
- describe alternatives and consequences associated with current issues involving wildlife management
- demonstrate basic competencies.

# WHEN

**SHOULD YOUR WORK BE DONE?**

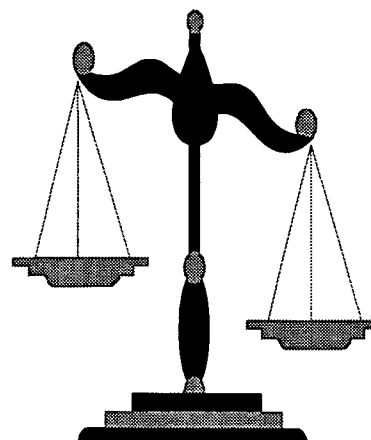
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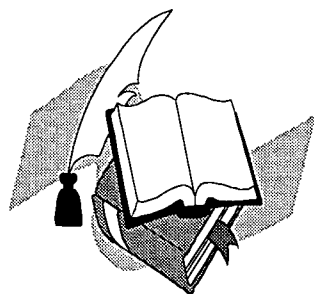


# HOW WILL YOUR MARK FOR THIS MODULE BE DETERMINED?

	PERCENTAGE
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# WHICH RESOURCES MAY YOU USE?



- *The Importance of Wildlife to Canadians*
- *Prairie Habitat: A Prospectus*
- Alberta Conservation and Hunter Education
- *North American Waterfowl Management Plan*
- *Conservation of Canadian Prairie Grasslands: A Landowner's Guide*
- *A New Leaf*
- Project Wild Activity Guide
- *International Wildlife*
- "Tallgrass Prairie Revival" (*Equinox*, Jan./Feb. 1993)
- *Canadian Geographic*
- Alberta Fishing Education Program
- *Water Management in Alberta*
- *A Wildlife Policy for Canada*
- *The Nature of Canada: A Primer on Spaces and Species*

**WLD3050 Wildlife Management 1**

# ACTIVITIES/WORKSHEETS

Video Review Questions - *A New Leaf: Real Sustainability for the Boreal Forest*

**Part 1: Branching Out**

1. What rare or endangered flora and fauna do Alberta's forests have?
2. The economic potential of Alberta's natural resources is tremendous. Name five established or budding industries that could increase job creation and expand renewable resource usage.

Think about it!

Discuss what options or compromises there are for various interest groups who want their share of the northern Alberta forests and wildlife.

**Part 2: A Natural Selection**

1. The forest is a renewable resource that is sometimes referred to as a sustainable forest resource. What does this mean?
2. What is the percentage of regrowth in clearcut areas after 10 years?
3. Regrowth in some clearcut areas is slow or nonexistent. Name and describe three inhibiting factors that slow down the process of natural reforestation and tree planting programs.
4. Describe the difference between a naturally occurring forest fire and a clearcut.
5. After an area of forest is clearcut, two dramatic things occur along the clearcut edge. Describe what happens in each case and how is the problem currently solved?
6. What is the cut block size recommended by researchers?
7. What are the four detrimental effects of clearcutting?
8. Advocates of selective forestry suggest three different alternatives to clearcut harvesting. Name, describe and illustrate with a diagram the methods involved.
9. Some European countries have initiated monoculture tree stands in tree harvested areas but are experiencing some difficulty with this method of reforestation. How and why does this problem exist?
10. What are alternatives for wood fibre?

Think about it

Is it feasible to think that selective harvesting by horse and small machine is economically and environmentally sound compared with the harvesting and reforestation methods that big logging companies use?

**WLD3050 Wildlife Management 1****Part 3: The Economics of the Boreal Forest**

1. What economic advantage do small logging operations have over larger logging operations?
2. What disadvantage do small logging operators have in securing forest harvesting rights as compared to the big multinational companies?
3. How can small industry create more labour-intensive jobs using the forest than bigger industry?

Think about it!

Do you think that Alberta industry can turn more profit, protect the environment and create more jobs by allowing the forest resources to become more multi-usage? If so, how?

**Wildlife Management 1: Short Answer Quiz**

1. State the Principles of Inversity. (1 mark)
2. Would an abrupt stop to a forest or other vegetative community hold any more animal life than a gradual transition from one vegetative community to the next? Explain. (3 marks)
3. Explain the difference between the concept of species categories extirpated and extinct species. (4 marks)
4. Explain what the carrying capacity of an ecosystem means. (1 mark)
5. Management schemes that deal with big game animals are varied. Name and describe three ways to manipulate the population of a big game animal such as moose during hunting season. (6 marks)
6. Describe two management schemes that could be employed to increase browse habitat for big game animals such as moose or elk. (2 marks)
7. Describe two ways to manipulate habitat and give a positive effect for each that would result from that manipulation. (2 marks)
8. Why does a wildlife inventory take place? (1 mark)
9. A sage grouse population is living in a small portion of southern Alberta. If a scenario such as this were to be played out, what could be three limiting factors to this bird's population? Explain each limiting factor. (6 marks)

## K. ACKNOWLEDGEMENTS

The Wildlife strand was developed through the cooperative effort of people from schools, post-secondary institutions, professional associations, business, industry, labour, and departments and agencies of the Government of Alberta. Alberta Education would like to extend sincere appreciation to the following individuals and groups.

### Career and Technology Studies Advisory Committee

Dawn Arnold	Tofield School
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### Natural Resource Studies Focus Group

Sherry Dalton	Concordia University College, Edmonton
Gene Dumont	Business/Industry Representative
Dixon Edwards	Alberta Energy & Utilities Board, Edmonton
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Robert Fessenden	Business/Industry Representative



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Cheryl Spencer	Canadian Wildlife Services, Edmonton

## **Field Review (1992–1993)**

Kathy Harrison	School System Representative
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## **Field Review (1993–1994)**

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## **Assessment Panel (1994–1995)**

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Cheryl Spencer	Canadian Wildlife Services, Edmonton
Robert Wasyluk	Kitscoty Junior/Senior High School

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Allen Herbst	St. Mary's RCS School, Taber
Cathy Methuen	Van Horne High School, Calgary
Rick Mrazek	University of Lethbridge
Cheryl Spencer	Canadian Wildlife Services, Edmonton
Robert Wasyluk	Kitscoty Junior/Senior High School

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Susan Lynch	Assistant Director, Curriculum Standards Branch
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